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Fellow of American Academy of Medicine, *Etc.*

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CINCINNATI MEDICAL NEWS.

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ORIGINAL CONTRIBUTIONS.

The Indigenous Diseases of Wyoming Valley.

BY J. B. CRAWFORD, M. D.

Read before the Luzerne County Medical Society, Pennsylvania.

THE duty was assigned me, at the last meeting of our Society, of opening a discussion to-day upon the subject of our "Endemic Malarial Diseases." The time which has intervened between the last meeting and this has not only been brief, but it has been a period of unusual labor in my ordinary professional duties, and I have therefore had but little opportunity for investigating the subject of this discussion.

The paper which I have now to present is but little more than some rough notes which I have jotted down at brief intervals, and amid frequent interruptions. I regret that I have not been able to give this subject the careful study, and the close, consecutive thought that a matter of so much interest and importance demands. I trust, however, that my own deficiencies will be more than compensated for by the other members who are expected to take part in this discussion.

The air, which was designed for the respiration of the higher forms of animated beings, contains in its pure state:

	Weight.	Volume.	
Oxygen,	23,	21.	Specific gravity, 1,000.
Nitrogen,	77,	79.	

A trace of carbonic acid and a varying amount of vapor are always found diffused through the atmosphere, but are not supposed to vitiate it in any degree, or to render it less adapted to the purposes of respiration, or to the maintenance of health. "Bad air," therefore, or "malaria," designates, in its broadest sense, some adulteration or changed condition of the atmosphere, or some admixture of noxious materials therewith, rendering it unsuited to the respiratory requirements of the animal system; or of exciting therein those aberrations of vital function which we call disease.

As this term "malaria" is generally used by the medical profession, and as it is usually understood, it designates an atmosphere vitiated by the emanations of low, swampy or marshy grounds, produced either by the effluvia of decomposing vegetation, the gaseous exhalations of a marshy soil, or by the minute spores of cryptogamic plants; and the effects of which are seen in the various forms of intermitting, remitting and continued fevers.

On a former occasion I stated to this society my reasons for believing that this form of malaria is produced by the spores of fungiferous vegetation. I need not, therefore, now enter into a discussion of the subject of malarial poisons, or the sources of malarial diseases in the sense that these subjects are generally understood throughout the world, and by the medical profession. .

The terms in which my allotted task for to-day is expressed, "Indigenous Malarial Disease," would seem to imply the idea that there is in the atmosphere of our locality some peculiar quality, or material, differing in its nature, and varying in its effects, from the marsh-tainted atmosphere of other malarial districts; that we have around and among us a class of diseases deriving their origin from a vitiated atmosphere, yet differing in respect to the symptoms which they present, or to the poisons that produce them, or in both, from the malarial diseases of other localities.

It will be well, therefore, at the outset of this discussion, to carefully survey the locality in which these peculiarities may be supposed to exist; to take a bird's-eye view of its conformation and surroundings; to observe whatever may serve to exert a deleterious effect upon the health of its inhabitants; and to study those impalpable, yet potent morbific agents that may be engendered by the peculiar conditions that surround us. The city of Wilkes-Barre and its neighboring towns are situated in a valley, or rather basin, closely surrounded by hills, which vary in height from eight hundred to one thousand feet. The bottom of this basin is, in the main, level; the soil alluvial, in some parts consisting of a coarse gravel, but mainly formed of a sandy loam. A few marshes of small extent are found within its borders, and a limited portion of its surface consists of a clayey loam. A river of considerable size, with a moderate but not sluggish current, passes through its longest diameter. Abundant springs of pure water flow (or rather once did flow) to the surface in every portion of the valley. Numerous streams glide down the mountain ravines, and empty their currents into the Susquehanna. Such is, or rather was, the topographical character of Wyoming Valley. Beneath its surface and extending far up on its contiguous mountain sides are rich deposits of anthracite coal. The processes of mining and utilizing this coal, and the industries which have been developed in connection therewith, have wrought extensive and important changes, not only in respect to population, to water supply, and to drainage, but have changed the constituent elements of our atmosphere in many and important respects.

I am informed that previous to the construction of the North Branch Canal, and the building of a dam across the Susquehanna River at Nanticoke, ague and remitting fevers and the other forms of miasmatic diseases were unknown in this valley; but that their occurrence immediately followed the construction of these works. For several years subsequently each summer and autumn brought an annual epidemic of chills and fever; and this yearly recurrence of miasmatic disease has been seen in the vicinity of Nanticoke up to the present time. But, as is usually the case, the succeeding cold weather of autumn and winter checked or destroyed the epidemic influence, and a period of comparative healthfulness ensued. The miasm which produces this endemic disease seems to be engendered by the successive flooding and drying of a considerable portion of the soil situated contiguous to the village of Nanticoke, caused by the dam which I have mentioned.

But there are other and more important particulars in which the salubrity of our atmosphere or our locality have been interfered with. In order to properly estimate these it will be necessary to consider somewhat in detail the sources, the amount, the composition, and the effects of the various gaseous products of anthracite coal, as well as of the various other contaminating agencies affecting not only the air which we breathe, but likewise the water which we drink.

Issuing from various portions of the surface of our valley are streams of carbureted hydrogen. This is evolved in immense quantities in every portion of the coal fields, and is generated in some of our coal mines in quantities so great as to be past computation. I am informed by the Superintendent of one of the coal mines within our city limits, that the quantity of this gas which is being constantly evolved within that mine is so great that, if the appliances for its removal were arrested for the short space of fifteen minutes, the life of every person within the mine would thereby be endangered. This gas consists of:

	Atoms.	Weight.	Volume.	
Hydrogen,	2,	24.6,	2,	sp. gr. .562.
Carbon,	1,	75.4,	1,	

This gas is most dangerous in consequence of its explosive qualities, and is properly known as fire damp. It is, of course, unsuited to the purposes of respiration, but is not directly poisonous in its effects. The worst consequences of its inhalation probably result from the adulterated, or rather the diluted, condition of the atmosphere produced by its presence. As its specific gravity is much less than that of air, it becomes speedily dissipated. It is not probable that this substance seriously vitiates the atmosphere, except in the way of rendering it less invigorating, and thus lowering the force of the vital powers.

Within the boundaries of Wyoming Valley there is annually mined about eight million tons of coal. About twenty-five per cent. of this amount, or two million tons, is consumed as wastage, and is piled up in numerous places about the mines. These culm-heaps, as they are called, have accumulated for many years, and it would be difficult to estimate the amount of this material which exists in almost every portion of the valley. These great mounds (they sometimes amount almost to mountains) are now nearly all on fire, and the amount of coal thus undergoing combustion is at least equal to the annual accumulation of refuse, or about two million tons. In addition to this it is estimated that about three hundred and seventy-five thousand tons are annually consumed for domestic, manufacturing and other purposes within the valley. Besides these we should take into account the vast amount of coal undergoing combustion within the mines. I have no means of estimating accurately the amount of coal that is thus consumed, but it has, probably for several years, amounted to considerably more than half a million tons annually. Thus we see that about three million tons of anthracite coal are being yearly consumed within the area which we are considering, and that nearly all of it is undergoing a slow and imperfect combustion. This amounts to about eight thousand and two hundred tons of coal daily consumed in this manner, and, of course, diffusing its noxious products through the atmosphere.

Besides carbureted hydrogen, the gases evolved by the combustion of anthracite coal are carbonic acid, sulphureted hydrogen, sulphurous acid, and carbonic oxide.

Carbonic acid is composed of:

	Atoms.	Weight.	Volume.	
Oxygen,	2,	72.73,	1,	sp. gr. 1.528.
Carbon,	1,	27.27,	1,	

This gas, although containing a larger proportion of oxygen than atmospheric air, is still unsuited to the purposes of respiration. The oxygen which it contains, being chemically combined by complete combustion, is, therefore, incapable of entering into new combinations in the capillaries of the lungs, and of decarbonizing the blood. It does not seem to be directly poisonous, although animals die when placed in it about as quickly as if placed under water, and in a very similar manner. There is this difference, however: an animal placed under water for a short time may be resuscitated after being removed from that fluid; but an animal being placed in carbonic acid, and having once inhaled that substance, is usually incapable of resuscitation. The reason probably is, that the specific gravity of carbonic acid being much greater than that of atmospheric air, it is consequently retained in the air-cells of the lungs, thus effectually preventing the ingress of air, and causing death by asphyxia. Even when largely diluted it is still capable of producing most noxious effects.

I have already stated that a small proportion of carbonic acid is everywhere found mingled with the atmosphere. This proportion is usually from three-tenths to four-tenths of one per cent. Whenever the proportion rises much above this the atmosphere becomes unwholesome. When it reaches even three per cent. it is wholly unfit for respiration. When it reaches five per cent. it is highly dangerous to life to breathe it even for a short time; and when its proportion is increased to eight or ten per cent. it becomes suddenly and certainly fatal.

The high specific gravity of this gas prevents its rapid dissipation, and renders it capable of being forced in a concentrated state, by air currents, in any direction, and to considerable distances. It must, therefore become pretty generally diffused, in varying proportions, throughout our atmosphere. The effects produced by this gas in a pure or in a concentrated state are well understood; but the effects produced by it in its more diluted forms are probably not so well ascertained. It seems to exert its deleterious effects by preventing the due oxydation of the blood, and thus manifesting its morbific power in disturbances of the nervous system. Headache, vertigo, fainting, nausea, pains in the loins, lethargy, palpitation, etc., are generally mentioned as characteristic effects of its inhalation. The severity of these symptoms must, of course, depend upon the quantity inhaled, as well as upon the nervous susceptibility of the person afflicted. I have no means of estimating the amount or the proportion of this gas which is present in the air of this valley. It doubtless varies greatly with other varying conditions of the atmosphere. Its general tendency is to accumulate near the surface, and in the lowest spaces. But this tendency may be overcome by wind currents, by heat, and by the tendency which all gases have of mixing together, or of diffusibility; and it may in this way become mingled with the atmosphere in more elevated locations. The amount of coal undergoing combustion about us is such as to indicate that an immense quantity of this gas is being constantly mixed with the atmosphere that we are required to breathe; such an amount, indeed, as must seriously interfere with the health and vigor of those who constantly respire it.

Another of the gases evolved by the combustion of anthracite coal, and the effects of which we have to consider, is sulphureted hydrogen. This is composed of:

	Atoms.	Weight.	Volume.	
Sulphur, . .	1, .	94.15, .	1-6,	sp. gr. 1.174.
Hydrogen, . .	1, . .	5.85, . .	1,	

This is an exceedingly active poison. Thenard states that atmospheric air which contains one-fifteen-hundredth part of its volume of this gas will destroy a bird; one-eight-hundredth part of it will destroy a dog, and one-two-hundredth-and-fiftieth part of it will kill a horse. Taylor, in his "Medical Jurisprudence," says, "Sulphureted hydrogen gas, when breathed in its pure state, is instantaneously fatal. It exerts equally deleterious effects upon all orders of animals and upon the textures of the body. It has been known to destroy life even when allowed to remain in contact with the skin." As this gas is generated by the combustion of coal, it is usually accompanied and mixed with sulphurous acid gas [S. O. 2]. The effects of each of these gases are very similar, both in respect to the symptoms which they present in the living, and in the lesions found, as a result of their inhalation, on *post mortem* examination. The effects produced by these gases in a pure state, as well as in a state of moderate dilution, are also well understood. Works on medical jurisprudence abound in instances of death produced by them in a concentrated state, as well as of the *post mortem* appearances presented by their victims. In cases of fatal inhalation of these gases, the symptoms usually noticed are purple lips, lividity of countenance, surface of body cold, hands and nails purple, inspiration quick and short, pulse small, quick and feeble, pupils fixed and total insensibility. The *post mortem* appearances usually observed are congestion of membranes of brain, effusion of fluid under the arachnoid, sinuses gorged with blood, lungs congested, and right cavities of heart engorged. The consequences resulting from the inhalation of these gases, in their more dilute form, must vary in their intensity, as well as in the character of the symptoms produced, according to the amount inhaled, the proportion of the noxious materials, as compared with the respired air, the vigor and susceptibility of the person affected. The results in these cases of slow, constant and partial poisoning have not been studied with the care and precision which their importance demands, and I apprehend that their damaging effects upon public health are not adequately understood and appreciated even by the medical profession. As an illustration of the powerful effects of these gases upon the lower forms of life, I may mention that, during a period of thirty years, which I have practiced medicine in this valley, I have never once seen a case of psora, or itch, which originated within our anthracite coal field; nor have I seen one which, having been brought here, did not speedily recover without medical treatment. This disease, as is well known, is produced by a minute insect, which burrows in the skin. Sulphurous gases have long been known as an efficient remedy for this disease. It is evident that our atmosphere contains a sufficient amount of these gases to effectually destroy this insect. This is one of the compensations which we enjoy for being compelled to respire an unwholesome atmosphere; but it forcibly illustrates the important changes that may be wrought within our bodies by agents whose presence, or even whose existence, is unsuspected.

Another contaminating ingredient of our atmosphere which is engendered by the combustion of coal, is carbonic oxide. It is composed of:

	Atoms.	Weight.	Volume.	
Oxygen, .	1, .	56.69, .	1·2,	sp. gr. .975.
Carbon, .	. 1, .	. 43.31, . .	1,	

We have already seen that carbonic acid consists of one atom of oxygen and two of carbon. Carbonic oxide contains one atom of oxygen and one of carbonic. In its formation, therefore, but one-half as much oxygen is abstracted from the atmosphere as in the former, but its effect in vitiating the air is far greater than that of carbonic acid. Carbonic acid, as we have seen, exercises its deadly power by choking or obstructing the air cells of the lungs, and preventing thein gress of oxygen. Carbonic oxide is a deadly and rapid narcotic poison. All atmosphere containing only one per cent. of this gas will destroy life in a few minutes, and in its pure state it is almost instantaneously fatal. It passes rapidly into the blood. In an animal which inhaled air containing ten per cent. of this substance for thirty seconds, the blood was found to contain four per cent. of carbonic oxide, and a diminished proportion of oxygen. The blood is brightened in color by its inhalation, as it is darkened by the effects of carbonic acid. This bright color is very permanent. It has been observed to continue for three weeks in animals which had been subjected to its influence. Its mode of action is supposed to be the reverse of that of carbonic acid—that is, it produces its poisonous effects by preventing the arterial blood from becoming venous, while carbonic acid poisons by preventing the venous blood from becoming arterial. In animals that have died from the effects of this gas in a diluted state, there has been observed an engorgement of the muscles of the heart, a congested state of the brain, and an anæmic condition of the spleen. But when life has been destroyed by the inhalation of this substance in a pure state, death has ensued so rapidly that very few *post mortem* appearances were produced. This gas is generated, like carbonic acid, by the combustion of coal, or the oxydation of carbon. It, however, is the product of an incomplete combustion, and the oxygen concerned in its production is only half as great, in proportion to the carbon entering into the combination, as in the case of carbonic acid. The slow combustion constantly going on in the culm heaps would seem to be especially favorable to the formation of this gas. This combustion goes on, for the greatest part, with but a very limited amount of oxygen; and much of it takes place under circumstances which admit of only the smallest supply of oxygen that renders combustion possible. Wherever the air has free access to the burning material, carbonic acid, as well as sulphurous acid and carbureted hydrogen, are produced; but in a slow and imperfect combustion, where the temperature becomes high, and where atmospheric air finds limited access, as in the interior of a burning culm pile, carbonic oxide and sulphureted hydrogen are evolved in the greatest abundance. Thus it will be seen that the combustion, which is so extensively going on in the culm heaps all around us, furnishes just the conditions which are most favorable for the evolution of the greatest quantity of noxious gases, as well as of gases of the most noxious kinds, that the combustion of coal is capable of producing.

In addition to the contaminating agencies contained in our atmosphere that I have already described, there are other products of decomposing materials about the air of our city which should not be overlooked when investigating the sources of our epidemic diseases. We have, within a limited area, a population of considerably more than twenty thousand. We have a flat and even surface, with little natural drainage, and that little, for the most part, artificially obstructed. We have had, until very recently, an almost entire absence of sewerage, and we still have only a very limited extent of it. The few sewers which have thus far been constructed discharge their contents on the margin of the river, in close proximity to the most populous portion of the town, leaving their decomposing materials to generate fetid and noxious gases along the entire river front of the city—polluting alike earth, air and water along its whole extent. But by far the larger portion of our city has not, and never has had, any sewerage whatever. Contained within the soil, in old wells, and in cess-pools, and in some places festering upon the surface, is the acumulated filth and nastiness of a century—a century of neglect, indifference to, and defiance of natural sanitary laws. Far less neglect of sanitary measures than is here seen has spread death and desolation through many a town and city. In view of the persistent and reckless neglect on the part of our inhabitants, or our authorities, to provide for the protection of their health or the prevention of disease, it seems the *imperative duty* of the medical profession to urge and to insist upon the adoption and the speedy execution of some efficient measures for the purification of our city. In the light of the history and experience of other cities, it seems strange that the people of Wilkes-Barre have hitherto escaped the penalties and the pestilence which persistent neglect of sanitary laws must sooner or later engender. It is criminal folly to attempt to ignore the fact that the atmosphere we are breathing is largely made up of materials that are highly injurious to health, that were never designed for respiration, and that the great quantities of carbonic and sulphurous gases that are constantly being mixed with the air around us, which proper prudence can greatly diminish, together with the exhalations of the immense amount of decomposing matter, which can be, and long ago should have been, removed and rendered innocuous, must necessarily produce, and does produce, an atmosphere better suited to the respiratory requirements of the extinct saurians of the carboniferous age, than for the respiration of human beings.

I regret, as much as any one can, the occasion and the necessity that exist for the utterance of such observations as I have made. We of the medical profession will, no doubt, profit pecuniarily by the continuance of the state of things which I have described. But it is our *duty* to view these things just as they are, and whether it be agreeable or not, to tell the people of this town what must be the consequence of a further neglect of some general and efficient sanitary regulations. It is high time that a thorough system of drainge and sewerage was adopted which will carry away the refuse of our city, and render the air about us incapable of contamination from such a source. It is high time that measures were taken to prevent the accumulation of culm in the vicinity of our city, and especially within its boundaries. The present system of its disposal is a shameful waste. The world needs, and at no distant day will need still more, every pound of that material which is now made to subserve no better purpose than to poison our atmosphere and destroy our health.

I have thus passed in rapid review what seem the most apparent, tangible, and obvious sources of malarial diseases which exist in this locality. We have seen that some of these gases, which are always abundant in our atmosphere, are directly destructive to the tissues of the body, as well as to the corpuscles of the blood. Their presence in the atmosphere, therefore, in any proportion, must necessarily render it more or less unfit for respiration. The effects of its inhalation must in all cases be damaging—varying in degree, not in kind, between the mildest and the severest consequences that it is capable of producing. All agree that there is a general prevalence of some atmospheric influence in this vicinity which depresses vitality and engenders disease. During the entire year—whether it be wet or dry, hot or cold—there is a general and a constant complaint of "*malaria*." The "epizootic" in its day, or the "Tyler gripe," was not more universal in its sway than is this prevailing influence which everybody feels or fancies, and designates "malaria." I have no doubt that this term has often been used indiscriminately to designate ills which have but little connection with atmospheric influence. It has become with us a fashin, or habit, to attribute every ill-feeling to this rather indefinite source. Intemperance, gluttony, exposure, dissipation and excesses of every kind produce everywhere a prolific brood of physical and mental ills, from which our population is by no means exempt. All these are usually called by anything but their proper name, and find a convenient receptacle in this general but rather indefinite term—this general diagnostic dumping ground—"*malaria*."

There is, however, a numerous class of diseases prevailing in our vicinity which doubtless *have* their sources in the atmospheric poisons of which I have spoken. It is quite uncommon to meet with a resident of this city who will tell you that he feels thoroughly and uniformly well. He will usually tell you that he feels an unwonted degree of oppression or of languor; that he has backache, headache, neuralgia, nervous irritability, capricious appetite, impaired digestion; that he is peculiarly sensitive to cold, or that he has slight chills; in short, that he has "*the malaria*," and that he has been taking quinine. He will also tell you that he always feels better when away from home; that even a short residence elsewhere always improves his condition, and that the beneficial effects of even a few hours' respiration of the pure air of our mountains are plainly and unmistakably felt by him; but that his former symptoms are again gradually but surely developed by a return to this locality. Are the symptoms so generally felt and complained of in our vicinity, which I have here enumerated, as well as the more severe forms of our endemic diseases, produced by the same agents or poisons which produce the malarial diseases of other localities? Or, are they engendered by the adulteration of our atmosphere with the noxious gases which are produced by the peculiar conditions which surround us? Do the endemic diseases of our locality, usually termed "malarial," differ essentially in their sources, in their symptoms, in respect to the remedial agents best adapted to their cure, from the malarial diseases of other regions? I believe that in most respects, and in by far the largest number of instances, they do. My reasons for this belief, briefly stated, are these:

1st. Miasmatic fevers usually prevail only in summer and autumn. A freezing temperature generally puts an end to them. *Our* malarial diseases occur at all seasons; indeed, we are never exempt from them. They are often most prevalent in cold weather, toward the end of winter or early in spring—the very seasons when ordinary marsh miasm must necessarily be most inactive.

2d. Diseases produced by marsh miasmata are usually strictly periodical in their occurrence, except in their more severe forms—and even then they often evince a tendency to periodicity—that is, miasmatic diseases (as generally seen) present intervals of comparative health, followed by a regular succession of chills, fever and sweating, with an indefinite recurrence of the same symptoms on successive or alternate days. Such recurrence is seldom seen in this locality; a complete subsidence of the fever usually terminates the attack.

3d. The disturbances induced by *our* malaria, in the milder classes of cases, speedily disappear without medication when the person affected is removed to a pure atmosphere. This change takes place much more slowly when sickness is induced by marsh miasmata.

4th. The ordinary causes which produce marsh miasm exist to only a very limited extent in this vicinity. Most of those moist, low places where miasm may once have been evolved are now covered by burning culm piles, or flooded by mine water, in either case effectually preventing the growth of cryptogamic or other vegetation, thus preventing the production of ordinary marsh miasm.

5th. The symptoms presented by our endemic diseases, while differing in the respects just stated from ordinary miasmatic disease, are such as usually result from the inhalation of the gases evolved by the combustion of coal.

6th. The particular periods when the manifestations of our endemic diseases are most marked, are during damp, still, foggy weather, when these gases accumulate in large quantity and concentrated form. The periods when we are most exempt from them are during and immediately succeeding brisk winds—by which these gases are speedily dissipated or carried away.

7th. There are still some marshy grounds within the boundaries of our valley, which have not yet been flooded with mine water, nor covered with culm, where marsh miasm is probably generated, and where that class of diseases, which is always produced by it, may yet prevail; but the area of such territory is so limited that its effects can scarcely be general.

I have no doubt that cases of miasmatic fever, or fever and ague, as well as its more intense forms, occur in this city. I believe I occasionally see such. I see many cases which I can trace to a different source—which have had their origin in carbonic and sulphurous gases—to the treatment of which quinine seems well adapted. But this is by no means conclusive proof, nor the slightest evidence, that the two diseases have a common origin or a common character. Both these malarial influences are, apparently, sometimes combined in their production.

In the more thickly populated portions of the valley, but especially in the city of Wilkes-Barre, endemic diseases, while deriving their principal causes and acquiring their chief characteristics from the gases of coal, are yet greatly modified or intensified by the commingling of other poisons—both gaseous and liquid—with these. The vile odors that assail our olfactories in nearly every portion of the city, emanating from filthy streets, from stagnant gutters, and from festering pools, greatly intensify and often strangely complicate the symptoms of these diseases. A prolific brood of fatal maladies may be engendered by these causes alone. These filthy exhalations certainly contaminate our atmosphere in a manner and to a degree that is alike disgusting, dangerous, and disgraceful, and no doubt often make it exceedingly difficult to determine just what is the remote or the proximate cause of a particular case of disease.

In most cities, and I believe to some extent in our own, the gases that are generated in *sewers* sometimes become a means of vitiating the atmosphere and a consequent source of disease. The evolution of gases in sewers is probably an unavoidable incident with all systems of sewerage. These are exceedingly complex in their composition, owing to the great variety of decomposable substances which find their way into the sewers of a large town. The most noxious of these effluvia, however, and those which most extensively and most injuriously affect health, are sulphureted hydrogen and sulphide of ammonium. The latter, like the more damaging gases evolved by the combustion of coal, is produced in the absence of, or in the presence of, only a very small quantity of oxygen. The few sewers which we have—I mean those constructed for public use—being of large size, and admitting a large amount of atmospheric air, do not engender the most offensive nor the most dangerous gases that may be produced in sewers. Still, imperfect plumbing and carelessness and unskillfulness in building, often, I apprehend—certainly sometimes—lead to the complete permeation of dwellings by the gases from sewers, with more or less injurious effects upon those who respire them. A careful and thorough supervision should be exercised by our city authorities over the construction of all dwellings, and every precaution that prudence can devise should be enforced in guarding against the possible production of disease from such sources.

The very limited extent to which sewers of any kind have been constructed in Wilkes-Barre renders it improbable that the air of our city is appreciably affected by sewer gases, except in the immediate vicinity of the sewers. There is a good reason, however, for believing that some of the *small*, close, and unventilated private sewers about our city, have been, and are still, a frequent source of disease. I understand that a very severe malarial disease has recently occurred in the family of one of our members which was clearly traceable to this cause. How many other cases of disease and of death in our city, originating in a similar source, have been unjustly charged upon Divine Providence, we can only conjecture.

The same damaging effects upon health which are so extensively caused by the burning of culm, are often produced on a more limited scale, but with even greater intensity, by neglected or imperfect appliances for the warming of dwellings, or in the use of coal for other domestic purposes. Instances of suffocation and of death from these causes occasionally occur. Cases of pneumonia, of bronchitis, of neuralgia, of chills and fever, originating in this manner, and of greater or less gravity, are, I believe, far more numerous than is generally supposed, not only in this vicinity, but wherever anthracite coal is consumed as fuel. The frequent complaints of malarial diseases that are heard in many of the larger towns and cities of our country, where marsh miasm is certainly not prevalent, but where anthracite coal is extensively used, are probably to a great extent due to the same carbonic and sulphurous gases that so seriously impair the healthfulness of this region.

In many portions of Wyoming Valley the springs and wells which formerly supplied the inhabitants with an abundant supply of pure and wholesome water, have been rendered dry by the operations of mining, and the inhabitants have consequently been compelled to obtain their water supply from adjacent streams, or from reservoirs supplied by pumping water from the Susquehanna River. The city of Wilkes-Barre receives a partial supply of tolerably pure water, during the greater portion of the year, from one of the mountain streams. Plymouth obtains a much smaller and less adequate supply from a similar source. With these exceptions, the water which the inhabitants of this valley use, is, as a rule, exceedingly impure and unwholesome.

Wherever mining operations are carried on, springs and wells in that vicinity are effectually drained, and the mineral tinctured water of the mines is poured into the adjacent water courses. These streams, often running through a densely populated neighborhood, generally become the receptacles of whatever is foul, disagreeable and unwholesome, and carry their impurities into the Susquehanna. To what extent these streams have furnished a direct water supply to our population I am unable to say; but the inhabitants of some of our larger towns have consumed these impurities in by no means homœopathic doses. The populous town of Pittston derives its water supply from the Susquehanna at a short distance below the point where the Lackawanna River pours into it a current of water so foul and poisonous that no living creature—not a fish, not even a reptile, can exist in it. Wilkes-Barre, during the hottest and driest portion of the year, is compelled to obtain a large proportion of the water it consumes from a similar source. Plymouth, in addition to the *richness* imparted to the water of the Susquehanna by Mill Creek, Toby's and other tributary streams of impurity, has the benefit of whatever filth is emptied into the former river by the sewers of Wilkes-Barre, and which is not retained along our city front for the purposes of perfuming our own atmosphere. Just what that substance is that by courtesy is called "water," in the vicinity of Nanticoke, I am not able to state; but, judging from the cadaverous looks of most of the inhabitants of that place, I should incline to the opinion that it is not very largely adulterated with *aqua pura*.

With two of the elements so essential to human existence as *air* and *water* thus rendered impure and unwholesome and made the media for conveying into our systems the agents and the germs of disease, it is by no means surprising that such an amount of "*indigenous malarial disease*" has for years prevailed about us as to have given to our valley the reputation of being an excellent place to migrate from; nor is it to be wondered at that its physicians should all have attained the reputation of being practitioners of *large experience*.

In regard to the medical treatment of diseases which are the consequences of the atmospheric conditions which

I have described, I am unable to lay down any general, much less any specific rules. In the milder class of cases, simple removal to a pure atmosphere is all that is required. To those who must remain and continue to inhale the poisons from which they are already suffering, tonics and stimulants usually afford at least an alleviation of the symptoms. Quinine, especially, seems to afford a ready method of alleviating discomfort for a time, but in the more severe cases of coal-gas poisoning, it seems altogether incapable of effecting a cure. The chills and fever, with their concomitant symptoms, run on, sometimes to a fatal termination, in spite of the usual anti-periodic remedies. In these severe forms of our endemic diseases, in view of the altered or deoxydized condition of the blood corpuscles known to be produced by carbonic oxide, I have been accustomed to administer chlorate of potassa in conjunction with muriated tincture of iron and quinine. This treatment, upon theoretical grounds at least, would seem to furnish the most practical method for counteracting the poisonous effects of the gas, by restoring the integrity of the blood corpuscle and sustaining the vigor of the nervous system. These are important indications to be fulfilled in all cases of pure, uncomplicated fever. But, as I have already stated, our endemic diseases are the results of such complex causes, and present such a variety of symptoms, that no specific rules can be adopted for their management. Each case must be investigated by itself, and treated according to the characteristics which it presents and the lesions which exist, by whatever methods most commend themselves to the intelligence, the judgment, and the experience of the physician to whose care it is consigned.

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SELECTIONS.

Treatment of Hæmoptysis.

BY HORACE DOBELL, M. D.,
Consulting Physician to the Royal Hospital for Diseases of the Chest, Lond.

1. Profuse and dangerous cavernous hæmoptysis, from rupture of aneurisms formed on branches of the pulmonary artery, in the walls of cavities, and from ulcerative erosion of large vessels traversing cavities.

Our first and main object here should be, to block up the cavity with clotted blood; our chances of saving life in the first emergency turn upon our succeeding in this. Rest and posture are our first remedies. We must take advantage of the well known fact that patients with open cavities can sleep best on the cavernous side, because the secretions from the cavity are thus prevented from continually draining into the bronchi and exciting cough. Therefore, in cavernous hæmorrhage, place the patient semi-recumbent on the same side as the cavity from which the bleeding proceeds. This position will favor the accumulation and stagnation of blood in the cavity, and its clotting should be at once promoted by the *topical use of styptics* in atomised fluids, or—in the absence of a spray producer—by the aspiration of impalpably powdered alum. It is to these cases that the *topical use of styptics* is specially suited.

Cold, ergot, and digitalis are next in value, from their rapid action; and to save every moment that is possible, hypodermic injection of ergotine is here eminently suitable. Faintness, short of syncope, should be encouraged. as it specially promotes our object; and, therefore, stimulants should be withheld till urgently required. All our other remedies may also be brought to help in turn.

These are the cases which have surrounded the idea of "breaking a blood vessel" with all the terrors of a sudden death. As it is unfortunately true that we may sometimes find it impossible to avert it. The vessel may be two large, and the rupture too extensive for any remedies to act before the patient is overwhelmed.

The same remarks, and the same treatment are applicable to—

2. The profuse hæmorrhage of aortic aneurisms; and in a less degree to those of cancer.

3. Capillary hæmorrhage of the first stage of pulmonary tuberculosis. Unless very profuse this need not cause alarm. The hæmorrhage may even be advantageous by temporary relieving the hyperæmia, and this end should be assisted by rest—general bodily rest, and local functional rest—as already described, and by the eliminative action of sulphate of magnesia. It is only when the hæmorrhage is profuse that other remedies should be used, and then ergot or lead are specially suited, and iron specially to be avoided. The constitutional condition of oxidation, and lack of fat in the blood, is the point to

which our attention must be turned directly the emergency has been met: for this is the *primum mobile* in the case, the predisposing as well as the exciting cause.

4. The hæmorrhages occurring in the course of advancing pulmonary disintegration as distinct from "*cavernous hæmorrhage*," are best met by the combination of styptics, saline aperients, ergot, and digitalis, and by topical styptic inhalations of atomised fluids. It is in these cases, also, that lung-tissue is most in danger of being hopelessly broken down by the hæmorrhage; and in which, therefore, the after watching of the temperature, counter irritation and antispetic inhalations are most likely to be called for. If the hæmorrhage is obstinate, and vascular excitement absent, turpentine is here a specially well suited remedy, for the patient is generally feeble and cachetic, and the turpentine answers several purposes at once.

5. In hæmorrhagic infarction, bleeding should not be stopped unless severe, and in that case atomised styptics are the best suited. The most important point is, to find the seat of the thrombosis from which the embolus sprang, and to protect the patient against a recurrence of the accident. The next point is to lie in wait for pulmonary gangrene, and if this is indicated by the character of the expectorated blood, to use turpentine externally and internally, and carbolic acid in vapor or spray. Professor Gerhardt says, "You will treat violent hæmorrhages (in hæmorrhagic infarction) with inhalation of perchloride of iron, and the use of tonics will be in various ways indicated. Under certain circumstances, you will seek to hinder the gangrenous softening of the infarction by antiseptic inhalations. But on the whole, this proposition is applicable; the infarction which is not infected either by the embolus or by the inspired air, cures itself. The danger lies in the embolism. If the infarction forms, the danger is already past.

6. Purpuric hæmorrhage is best treated with turpentine and iron.

7. The hæmoptysis of retrograde congestion specially requires digitalis, sulphate of magnesia purging, rest, and appropriate position.

8. Vicarious hæmoptysis, due to the excessive vascular tension associated with the menstrual period, is best treated by cholagogues and aperients, and by the usual means of restoring normal menstruation. Its recurrence

should always be anticipated and prevented by timely remedies. If normal menstruation is obstinately absent in spite of the usual means for its restoration, and the pulmonary hæmorrhage insists on periodically recurring, a leech or two applied to the sacrum, or near the anus, or, as Trosseau recommends, on the knees, when the monthly period threatens, is an efficient means of treatment.

According to my experience, this form of hæmoptysis is very common, and of itself does no serious harm. It need not, therefore, cause any alarm, were it not for one circumstance, and unfortunately that is a very serious one—viz., that the reason why the lungs become the seat of the vicarious hæmorrhage instead of some other vascular organ, may be that they are rendered vulnerable by pre-existing or impending disease. It is with this view that the case must be carefully investigated, and both at the time and afterwards, vigilantly watched; and it is especially under the guidance of this view that we must select our remedies.

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SERVICE OF DR. WILLIAM PEPPER.

Clinical Remarks on Epilepsy.

TO-DAY I desire to offer a few remarks on the treatment of epilepsy. At first I will ask your attention to a few different types.

Here, for instance, is the case of a young man, aged eighteen; his head has been noticed to be large since his fourth month. He has never been well—always more or less delicate or sickly. It is a case of chronic hydrocephalus, not rickets, but the enlargement is due to a serous effusion into the ventricles of the brain, or it may be on the surface of the brain. The square protrusion of rickets is lacking, but we have the high, spherical development and depression of the orbital plates. We also notice the contrast between the large brain-case and the comparatively small features. We find no traces of rickets at the end of the long bones, nor at the ribs.

It is a state of chronic hydrocephalus which has been arrested and resulted in a prolongation of life. He is now eighteen years old. Sometimes such patients live to adult life, and even to middle age, the individual being possessed of moderate mental powers. The father and mother are both healthy, but the mother had chorea at the time of his birth. Of their eight children all are healthy but William, our patient.

He has been having fits since his eighth year. His first attack lasted several hours. During the last month his fits have become more frequent; whereas, formerly, he had about three fits a month, he now has had nine within twenty days. The attacks come on suddenly, without warning. He immediately loses consciousness. Sometimes the disordered muscular movements are so brief that they scarcely attract attention, and at other times they are very violent and prolonged, and he is tossed about and almost torn to pieces by the violence of the attack.

The fits are connected with organic disease of the brain, and consequently we speak of them as symptomatic. There is a positive lesion in this case: viz., the distention of the ventricles, which gives rise to constant irritation by pressure on the motor ganglia at the base of the brain. It is probable that in the first convulsion a rupture took place of some of the motor fibers of the left side, which caused a right-sided hemiplegia from which even yet he has not recovered. It is quite possible that, owing to the pressure, the meninges have become somewhat roughened, and this may play some part in the production of the fits. Here we have an organic disease of the brain exciting the fits as a symptom. Diseased conditions need not be at the base of the brain, nor yet in the spinal cord, for us to have symptomatic epilepsy.

The next case is a gentleman twenty years of age, who presents a most interesting condition, and demands our utmost consideration. He is healthy, strong, has had no constitutional disease, but had remarkably bad luck in regard to falls and blows on the head. Ten years ago he got a blow with a club on the right side of the head, which knocked him unconscious. Later than this, about eight years ago, he was thrown out of a wagon and struck on his head. Four years ago he had a somewhat bad attack of typhoid fever. About eight years ago he fell on the ice and was insensible for two hours. All of the family are healthy.

The first fit occurred seven years ago, when he was thirteen years old, some months after he had fallen on the ice. From that time he had no fit until June, 1880, when he was unconscious for one hour and a half. The third fit occurred on the third of the following October; the fourth on the first of March, 1881; while the fifth and sixth have occurred respectively on the second and the twelfth of April. Lately he has noticed that after exertion he has slight attacks. On a few occasions only he has had a distinct aura, which began at the base of the chest.

Examining his skull we found no depression of bone nor signs of fracture, nor can even a scar be found. It is therefore very difficult to determine the precise nature of the cause. We have distinct epileptic attacks combined with the petit mal.

It is often very difficult to determine in such cases whether the attack be an essential epilepsy or symptomatic of some local lesion about the head. We are all liable to epileptic attacks. Reflex excitability resides in all. The more healthy the nerve-tone, the less liable are we to have morbid muscular movements. As the nerve-tone is impaired a morbid excitability of the nerve-centers presents itself, and then also do we meet with the irregular muscular movements.

Irritation from undigested food in the intestinal tract, the presence of worms in the intestines, a tooth pressing on a tender gum, or a splinter in the matrix of a nail, all may cause violent convulsive movements—a reflex fit. If, in addition to this source of irritation, we have weak nerve-centers, then the fits are more likely to occur, and yet more likely if the irritation is nearer to the nerve-center. When the centers become abnormally excitable, we have a state predisposing to convulsions. This predisposition may be so marked that the slightest irritation may cause the fit. This last condition described is sometimes a congenital affair, affecting certain parts of the nervous system more than others. It is a morbid state of the nervous center, which may be acquired after typhoid fever, may come from malnutrition, from anæmia, from overwork, from depressing passions; all may breed the morbid condition that is at the root of epileptic convulsions.

A blow on the head may produce these convulsions, a spicule of bone may cause the irritation, while concussion may so impair the molecular structure of the brain that the organ becomes permanently injured. With such conditions there is developed an increased susceptibility to nervous irritation. Here in this case it is exceedingly important to determine which of these two causes exist, as on them depends our treatment.

In examining epileptic patients it is very necessary to find out distinctly and definitely when the first attack occurred. In proportion as the attacks occur earlier in life, the more probable is it that they have a congenital origin.

This lad is fifteen years of age; as a boy he was unusually bright, active, and energetic; he went into everything with his whole soul. In the summer (May) of 1879, while he was playing in the midday sun, he had his first fit. Since then he has had a number of these attacks. He has been under the regular epileptic treatment, and has improved only temporarily.

Latterly the epileptic attacks have been mixed up with morbid excitability of the nervous system, as manifested by restlessness, talking at night, and other phenomena of irritation. With this there was evidently serious impairment of nutrition. This patient probably overtaxed his nervous system, and his nutrition was impaired to a great extent, when some sudden excitement brought on the attack.

Unfortunately, there is a possibility of his having had an attack of true sunstroke, and I have often seen convulsions following sunstroke when a meningitis has been caused, the subacute meningitis occasioning fits in after-life. Probably, however, as the boy worked hard and grew thin, the convulsions are functional—are due to a state of malnutrition.

We have now seen instances from the worst to the best, cases of convulsions occurring under widely different conditions—all included under the name of epilepsy.

Let us look for a few minutes at the treatment from a general point of view.

In the first place, when you see a case, look for the cause, and see whether it is remediable. Sometimes we find a depression of the skull; such cases should be trephined at once, and the condition of the bone examined. Whenever you can locate the seat of injury, use the trephine; the operation is rarely followed by any trouble.

The study of localization by means of the fact that injuries at certain points give rise to more convulsive movements than is observed in others, may prove a valuable guide. Generally you must have a depression or scar before you trephine. Sometimes, when the bone has not been injured, the trephine has proved to be of great benefit. In our second case, although I think that the symptoms are due to pressure, I am unable to locate its seat.

In the third case, his condition is certainly predisposed to it: insufficient body-weight, in proportion to his height and age; he has positive anæmia, and a want of actual muscular strength combined with a constant irritability—a muscular restlessness; his feet and hands are cold, his pulse weak, the tongue coated, bowels irregular; the food is not properly assimilated; the urine gives evidence of this, by being constantly charged with the phosphates.

Perhaps some of you may remember that I showed you last spring a case of epilepsy, with gastric aura, in an anæmic, thin, weak young man. He had received a heavy blow on the back, and he had begun losing ground; his health was impaired, and he became epileptic. His family were all remarkably weak. His brother had just recovered from incipient phthisis; his sister had chorea; his father was in bad condition. Placing him in bed, on a rigid milk diet, beginning with small quantities of milk, gradually increasing it until he took three quarts per day, he appeared to be absolutely cured. He gained thirty pounds during that period, and is now a well, vigorous, and hearty man. Since February 13th he has had no epileptic seizures. The only thing medicinal he took was minute doses of nitrate of silver, which were given him for its action on the gastric mucous membrane, as he was suffering from gastric catarrh.

Sometimes it is necessary to change the individual's whole mode of life. Total change of climate will sometimes cure our patient, when combined with suitable diet, etc.; but rest in bed is one of the most useful means, together with a most radical and rigid diet, until we get the system purified, and then we may increase the diet. Such a treatment works a change in the molecular and chemical conditions of the body, and so we get some of the most complete recoveries, not only from this disease, but also from a very large number of chronic diseases.—*Medical Record.*

The Advantages of Calomel in the Diseases of Childhood.

BY E. MARLETT BODDY, F. R. C. S., F. S. S.

Calomel, by reason of its purgative properties, frequently causes green evacuations, and so does caster oil when the child is out of health; but this phenomenon of disease ceases the moment the child becomes well. Therefore, the green stools are not by any means produced by the calomel, but are caused by some morbid action going on in the intestines. When the child is ill the mother will almost invariably tell you that the evacuations are green and slimy. This assertion of the parent alone proves that calomel, when given, is not the originator of green stools, but that they are produced by some morbific influence. I think the color is very probably caused by an over-secretion of bile, which will to a certainty show itself independently of the calomel.

As there is no fear of mercurialization arising from calomel, as it promotes the elimination of the over-secretion of bile, and as it restores the intestinal canal to its ordinary healthy tone, it is, without doubt, the best purgative we can possibly administer in *all* diseases appertaining to infancy, ignoring to a certain extent those of a congenital nature. Mercurialization can only occur when the drug is allowed to remain and accumulate in the system; and to accomplish this the best method is to follow the general rule, viz.; the administration of the hydrargyrum cum creta; by so doing we shall be decidedly successful. But as this result is not desired, we shall be able to prevent such an untoward complication by administering calomel by itself, or combined with a small amount of sugar. This addition is not at all necessary; in fact, I do not understand what advantage can be gained by combining the two. Calomel, I think, is quite as efficacious without sugar; therefore it can be well dispensed with.

Regarding a very recent sage discovery made by a certain *savant*, that by giving to an infant calomel and sugar we may very likely poison it through the formation of corrosive sublimate while the compound remains in the stomach, though chemically true, yet I must say it almost verges on puerility. No case of poisoning has, I believe, occurred through the combination of calomel and sugar, and I dare say never will. I think we may consider it as bordering on the absurd until a *bona fide* case of poisoning resulting from the administration of calomel and sugar is brought before the profession, and thoroughly substantiated as such. The discovery is ingenious, to say the least of it; but it is of no practical utility when one considers it in the abstract. However, it is not for this chemical change in the stomach that I am advocating the non-administration of calomel and sugar, but because I do not see what can be possibly gained from the combination of the two. In such matters we can only judge correctly by the relative value of the results obtained; and if calomel produces that which is to be desired by its own inherent qualities (which are not in the least enhanced or diminished by the sugar), then in *all* cases, I say, of infantile disease we may with safety and advantage administer it by itself. In dropsy, one of the sequelæ of scarlet fever, some compound jalap powder may be combined with it with advantage, though I have found that calomel alone is equally as efficacious, even supposing that there is albuminous urine. Calomel may also be combined with santonin in cases of worms; but of this anon.

We have now ascertained conclusively, I think, that it is highly injudicious to give infants hydrargyrum cum creta, owing to one ingredient, stultifying, we may say, the action of the other, and that it may be left to discretion whether any gain may result from combining calomel with sugar; it now remains for us to determine how we may promote its action to a greater degree, and thereby accelerate a speedier return to health.

To obtain this end satisfactorily I always make it an invariable rule to administer the calomel at night, and the next morning to follow it up with some caster oil, which practice has always resulted by my expectations being realized. Sometimes, on account of the stubbornness of the bowels, owing to neglect, calomel is comparatively powerless as regards its purgative qualities; but it never fails when followed by the caster oil, which seems to stimulate it to fresh exertions, and entirely prevents, in children as well as in adults, the much-dreaded mercurialization.

This mode of treatment is, as the reader may perceive, remarkably simple, and consequently by some may be impugned as being too much so; but simplicity, to my mind, is or should be the goal of all things. Complexity and abstruseness show undeniable and unmistakable ingenuity and tact, and great praise is due to those who can obtain the desired end through the media of such channels; but the great fundamental in the treatment of disease is simplicity, which, if carried out successfully, is the acme of medical science, and the perfection of medical skill.

Some seem to have a grudge and a determined ill-will toward calomel; no words and terms are too strong for them to use when they denounce it; in fact, they abuse it with a hearty good-will; and many, I know, would prefer giving no medicine at all than be under the necessity of administering it. Some are truly fearful, and altogether refrain from using it, because so and so may happen; but what catastrophe one can not without great difficulty elicit from them; and, supposing we are successful in our endeavors, we find their objections and reasons very vague and unsatisfactory. Some will honestly tell you that to a certainty mercurialization will occur, and that is the sole reason why they do not use it.

Assuming, for the sake of argument, the correctness of their objections, I do not see why such a result should necessarily occur if it be given with care. If a man chooses to cut his throat with a razor, there is no reason why I should follow his example, for I may use the very same implement for other purposes. If a man chooses to poison himself with opium, the same drug given by me may save another man's life. So it is with calomel; if a man administers it carelessly and injudiciously, evil consequences may result; but I may give the very same drug, and good results will ensue.

This dislike to calomel is sheer prejudice, and in many instances approaches the whimsical. I remember being told by a great enemy to calomel, that it should never be given save to a plowman, and then only very gingerly. "Colocynth and hyoscyamus," said he, "for a lady, colocynth and jalap for a gentleman, but colocynth and calomel for a plowman." This absurd injunction, I need hardly say, I very soon found to be the quintessence of erroneous treatment; besides, it was entirely antagonistic to all common sense; for the intestines of a "plowman" have not as yet been discovered to be dissimilar to the intestines of a "lady" or "gentleman." Perhaps when he made the above remark he was under the impression that there did exist a dissimilarity, and, being of that opinion, considered that a different course of treatment was necessary to meet the various peculiarities of the several intestines.

This digression serves to show what a groundless, illogical abhorrence some have to calomel, for no reason at all except that something prejudicial to the patient may possibly occur, but of what nature they are entirely undetermined upon, unless it be mercurialization, which is the only objection its opponents can reasonably urge against its administration.

In what diseases or morbid conditions of infancy is calomel indicated, and how should it be administered, whether alone or in combination? Infantile diseases are few in number when compared with those which attack the adult, for the following very cogent reasons: The constitution of the infant or child has not gone through the wear and tear of life; the lungs have not yet been irritated through inhalation of infinitesimal carboniferous matter; the digestive powers have not yet been impaired through the ingestion of indigestible food; nor have the coats of the stomach been injured by the destructive properties of alcohol, which is regarded by a great majority as a necessary staple of nourishment, and neither is the liver disorganized by habitual drinking.

The most prevalent of all infantile diseases are convulsions, proceeding from either intestinal or cerebral irritation, or from dentition. Those arising from intestinal irritation are sometimes induced primarily from dentition, and in many instances one state is co-existent with the other; and the same may be said regarding those convulsive attacks which owe their origin to cerebral irritation, though the latter condition may exist singly and alone; in other words, we may find one state complicated with the other.

There are two kinds of intestinal irritation—that proceeding from fecal contents, and that resulting from the presence of worms (which generally belong to the round variety, though sometimes the thread-worms are also provocative of convulsions, but they are not of so severe a nature, and they are more common among children averaging from two years and upward, but rarely found among infants at the breast). Those convulsions proceeding from irritation, produced by the accumulation of fecal matter, are easily cured if treated correctly, but are simply aggravated if treated in the usual style, *i. e.*, two or three grains of hydrargyrum cum creta administered three or four times during the day.

All that these infants require is a calomel powder at bedtime, followed the next morning by some caster oil, which must be continued till the alvine excreta resume their normal appearance, which is too well known—at least I hope so—to my readers to need specifying. However, as it is the generally-received opinion of the profession that calomel produces green stools, irrespective of the condition of the patient, I do not think I shall be erring on the wrong side when I tell them that when an infant is in health the ejecta are as yellow as mustard, whether it is administered or otherwise.

When the convulsive attacks proceed from the presence of worms, santonin should be combined with the calomel, and should always be given at night-time, to be followed the next morning by some caster oil. This course should be perseveringly persisted in till the motions are natural, which will very soon occur after the expulsion of the parasites. There is not the slightest fear of mercurialization, nor will the santonin cause retention of urine, and neither will the convulsive attacks be increased, for the very reason that the santonin has not sufficient time to resolve itself into xanthopsin, on account of its being eliminated by the caster oil.

If the convulsions proceed from the irritation produced by the oxyuris vermicularis, or the ascaris vermicularis, commonly known as the thread worm, the best treatment to pursue after the motions have become normal (which will by no means take place till the worms have been expelled) is to inject some infusion of quassia or salt and water into the rectum. This is comparatively useless if the administration of calomel and its adjunct (if I may so term caster oil) is omitted; for though those minute parasites are supposed to infect the rectum only, they would, no doubt, be found, though perhaps fewer in number, in the sigmoid flexure and descending colon, if they were searched for on a favorable opportunity, which could only be in a *post mortem.*

Depending simply upon an injection in those cases is really not of much benefit; if I may be allowed to make a comparison, it is like clearing out the lower part of a drain-pipe and leaving the upper portion foul and impure.

I have already mentioned the treatment which should be followed out during teething, and I think I have clearly demonstrated the disadvantages accruing from the administration of the hydrargyrum cum creta, and the advantages resulting from calomel, and the remarks I have made regarding them will also apply to nearly all the diseases which are prevalent in infancy.

I shall now pass on to consider those other complaints in which the administration of calomel is advisable. The most common after convulsion is diarrhea—a medical bugbear which, when once it commences, frightens the mother, and causes the medical man to resort immediately to a very silly mode of practice, but which at the present day is regarded as a very scientific procedure; and the antidote (presumed to be such) is to be found in the British Pharmacopeia, and accordingly it is given with great faith when diarrhea shows its hideous presence, in the vain hope of stopping it.

What is diarrhea? and what causes it? and why should we be in such consternation when it occurs? We will examine and answer these questions from a practical common-sense point of view.

First. What is diarrhea? The answer is simple and not at all difficult of comprehension. It is the endeavor of nature to get rid of an evil, and the evil is nothing more nor less than a collection of fecal matter in the intestinal canal. In the majority of cases what else can it be? If the coats, especially the muscular, of the intestines are weakened to any extent in an infant, there are very few chances of its ultimate recovery, because the weakness depends upon some organic mischief, which is not to be remedied by human means. Now if the diarrhea originates from such a condition, all the chalk mixture in the world will not stop it; and, most probably, if the administration is too often repeated the child rather succumbs to the pernicious effects of the astringent than to the diarrhea. Here in these cases, by-the-by, we administer chalk to stop the action of the bowels, and in other cases we combine chalk with mercury to open them—contradictory, there is no denying; but then it is accounted correct treatment.

Second. What causes diarrhea? The contents of the intestinal canal and the efforts they make to get out—nothing else. They have done their duty; all nutriment has been extracted from them; they are therefore useless, and nothing else than an incumbrance, and consequently the sooner they are ejected the better. Nature is of the same opinion, and accordingly sets to work, and would perform her duty alone and single-handed were the fecal contents in their usual amount and normal condition; but it is not so; the infant, no doubt, has been previously stuffed or rather overfed by a too anxious parent. The intestinal canal is too full, and as a natural consequence diarrhea results, which is the strenuous effort of nature to rid herself of an irritating load, which we scientifically endeavor to prevent by the prompt administration of an astringent in the shape of chalk-mixture. In these cases nature requires the helping hand to lift her over the difficulty, not to be thwarted or antagonized by the administration of drugs of an astringent tendency. Such treatment is not only outrageous, but discreditable to medical science; and I regard it as such, however strongly and indeed cleverly it may be advocated by those who are thought more competent to decide than others; for the arguments they advance with such plausibility are entirely based upon theoretical knowledge (or practical ignorance) rather than upon sound principles of practice and careful investigation into the varied phenomena of health and disease.

I am afraid that we regard the human organism as a piece of workmanship much more complex in its design and working than it really is; and again, that we too frequently run our heads against the idea that we can mould it just as we please, forgetting that nature is, on the average, able to conduct her own proceedings to a favorable termination without the aid of science, but is hindered and perhaps completely impeded by our somewhat too great a hastiness to adopt the so-called scientific treatment of the present day, and which, in infantile diarrhea, is more hurtful than otherwise.

One question now remains for our consideration. Why should we look upon the presence of diarrhea with the eye of suspicion and apprehension? and why should we regard the efforts of nature to relieve herself as indicative of danger? I think we can easily account for our groundless fears from the fact that we clothe simple diarrhea in so many technicalities that many, who are either too indifferent or too ready to take for granted the opinions of others, neglect investigating and probing to the bottom the origin of a condition which is quite the reverse of what we imagine to be prejudicial to health.—*Medical Press and Circular.*

Incontinence of Urine in Boys.

BY JOHN MORRIS, M. D., OF BALTIMORE, MARYLAND.

Read Before the Baltimore Medical Association, April 25, 1881.

Incontinence of urine in old people is frequently an evidence of some severe nervous lesion, but it is not so in the young. In the latter it is a curable disease, and exists almost independently of brain or spinal trouble. It may result from a number of causes, the most frequent of which are intestinal irritation, acidity of urine, worms, defective nutrition, feebleness of constitution, and, possibly, teething. A very frequent cause, too, is a nervous temperament, or diathesis, independent of any organic disease; but the most frequent cause of all, in my judgment, is a condition of the bladder, or rather of the sphincter, brought on in early youth through the slovenliness and inattention of mothers and nurses. They feed the child with improper food, and suffer the bladder to become distended before putting it to bed. No attention is paid, even during the day, to see that the urine is voided at proper intervals. The consequences of this inattention are daily recognized by medical men on entering dwellings and rooms occupied by these poor, forlorn children. To make it plainer, it is enough to say that the odor of these apartments is not that of "Araby the blest."

In the treatment of the disease it is necessary for us to ascertain its origin. The history of the child, and its habits from birth, as well as the family history, should be inquired into. The urine should be tested for acidity, and the bladder and rectum, if needs be, examined. Atony of the bladder might, by causing over-distention, give rise to it, or undue irritability might prove sufficient to overcome the resistance of the sphincter. If incontinence be due solely to acidity of the urine, it is easily cured. The administration of a simple alkali in combination with benzoic acid is all that is necessary. A solution of benzoate of soda, combined with a very small quantity of belladonna, will be found very useful in this condition. This form of the disease is owing to perverted secondary assimilation. If the disorder is caused by worms, some anthelmintic remedies will be required; but worms in this affection, as in many others, are simply a *bugbear.* Intestinal irritation, no matter from what cause, must be met by proper agents; defective nutrition, by the use of cod liver oil, iron, and a judicious general regimen, embracing the cold bath, fresh air, calisthenics, etc.

The form of the disease most amenable to treatment, and which, as I said before, is very common, is the purely nervous form. It is most frequently met with in boys and girls of a lymphatic or scrofulous temperament. They lose the co-ordinating power, at first, from the will not being called on and properly exerted, and this is afterward kept up by habit. In these cases the syrup of the iodide of iron and the cold sitz bath act as a specific, particularly if aided by moral means. Large doses of the iodide of iron must be given to the big and strong boys in public reformatories. The reason that syrup of the iodide of iron is preferable, in cases of children, to other preparations of iron is, it is easily decomposed in the stomach. The iodine is set free, as Jacobi states, and acts as an anti-fermentative in the many cases of disturbed gastric digestion occurring, even in normal children whose circulation has been disturbed, or whose gastric secretions are certainly below their normal amount, in consequence of a deficient supply of blood. If nocturnal enuresis exists with daily incontinence, belladonna may be given with the iron at bedtime. I can speak with great confidence of these last two remedies. I have given them a fair trial, and in every instance, save one, have they proved beneficial; indeed, in my judgment, they are the only drugs which have any real value in this disease. Strychnia has no specific powers, and I much doubt if a single cure has been effected by it. In cases of atony, or paralysis of the bladder, I believe it might, in combination with syrup iodidi ferri, prove highly efficacious. In abnormal irritation of the bladder, belladonna is our best remedy, and far preferable to conium or henbane; the bromide of potassium has been recommended, but I think it almost useless. Tincture of cantharides has no virtue whatever, at least I have obtained no good results from its administration.

In the purely nervous form of the disease that I have heretofore described, the condition of the urine is very singular. It is voided in large quantities; it is limpid, almost colorless, and lacks the normal ingredients. Hysterical patients, as you all know, pass enormous quantities of limpid urine, and from precisely the same cause. The diet of the little patients suffering from this particular kind of enuresis is an important matter. From their family history, peculiar temperament and other causes, they are apt to be over-indulged, and the loathsome penalty they pay is oftentimes but a retribution of the gods.

In mechanical means I have no confidence whatever; I have tried Sir Dominick Corrigan's remedy, the application of collodion over the meatus, but obtained no good results. As I left it to the patients themselves to make the application, it may be possible that it was ineffectively done, or perhaps the collodion itself was defective in quality. I think it possible Sir Dominick's suggestion may prove useful in other hands and under better conditions, and I shall certainly recommend its trial in the public institutions I have referred to. It is, at least, the only one of the mechanical remedies that possesses the slightest trace of merit. Of course, if incontinence of urine can possibly be superinduced by congenital phimosis, an operation is necessary. I invariably examine the prepuces of my patients, with a view to the discovery of any local trouble. Trousseau's truss, the passage of a catheter, the injection of warm water, as proposed by Dr. Braxton Hicks, Pluvier's pads, applying a nail to the back, a circular band around the pelvis, etc., are not only useless, but injurious.

Hot Water Injections for Post-Partum Hemorrhage.

This use of hot water, as recommended by Emmet, appears to be more and more appreciated across the Atlantic. Dr. Atthill, Dublin *Journal of Medical Science*, says that this treatment has proved eminently satisfactory. It has, indeed, much to recommend it, for not only is it a powerful hemostatic and excitant of uterine contraction, but it is also a general stimulant. If used with ordinary care, it is not only harmless, but beneficial, by thoroughly cleansing the uterus from clots, portions of membrane, etc., which may have been left in its cavity. It will not, in Dr. Atthill's opinion, be found altogether to displace the use either of cold water or of the perchloride of iron, but rather to be applicable to a distinct class of cases, in which the former of those remedies would be unsuitable, and the latter unnecessary. The method of carrying out the practice is exceedingly simple. An ordinary syphon syringe is the only instrument required, though we now use one with a long vulcanite nozzle, specially constructed for vaginal and intra-uterine injection. This is carried up to the fundus, and, with the usual precautions against injecting air, and securing a free return, we inject water as hot as can be conveniently borne by the hand, *i. e.*, about 112° F., in a full stream into the cavity, continuing this until a good contraction is secured, and the water returns quite clear and colorless. Dr. Atthill gives the following as some of the results of his experience in the use of hot water:

1. In cases of sudden and violent hemorrhage in a strong and plethoric woman, it is better first to use cold.
2. Where, from the prolonged and injudicious use of cold, the patient is found shivering and depressed, the beneficial effect of injecting hot water is rapid and remarkable.
3. In nervous, depressed and anæmic women, hot water may at once be injected without previously injecting cold.
4. In cases of abortion, where, from uterine inertia, the ovum, although separated from the uterine wall, is wholly or in part retained, the injection of hot water is generally followed by the most satisfactory results.
5. Where the injection of the perchloride of iron is considered necessary, previous injection of hot water clears the uterus of clots, etc., permitting the fluid to come directly in contact with the bleeding surface, and lessening the danger of septic absorption.—*Chicago Medical Review.*

The Treatment of Consumption.

In a paper on the treatment of pulmonary consumption, Prof. Peter, of Paris, insists strongly on the value of hydrotherapy. He begins with frictions with dry flannel, then passes to rubbing with cloths dipped in aromatic alcohol, cologne water, or vinegar, followed by dry friction for five or six minutes, and finally advances to the use of the cold sponge. The process is repeated twice daily, immediately after rising and before retiring. He believes sponging to be better than the douche, because it is more easily carried out. The chief points to be observed are, to accustom the patient gradually to the use of cold water, and not to prolong the bath too much at first. Prof. Peter divides the sweats of phthisis into three classes, according to their cause, viz.: ordinary night sweats, which depend not so much on the pulmonary trouble as on the general condition and the tubercular fever, the sweating which follows high evening exacerbations of the fever, and colliquative sweats. To control the first, he recommends especially sponging with vinegar, combined with the usual internal remedies, such as acetate of lead, tannin, etc. Atropine, he considers unreliable. Quinine is useful for the second form, because it controls the fever. For the colliquative sweats there is no remedy. For the cough he gives opium and belladonna in small doses; he orders pills containing one-sixth of a grain of opium, and one-twelfth of a grain of ext. belladonna, and gives at first, one at a dose, increasing afterward if necessary. When the cough causes vomiting, he gives one or two drops of tincture of opium before meals, with good effects. When the vomiting seems to be due more to dyspepsia than to the cough, he gives a few drops of hydrochloric acid after the meals. In such cases, alcohol in some form is also useful, but it must be given freely. For the diarrhœa, when it is due to simple intestinal catarrh, as is usually the case at the outset of the disease, he employs subnitrate of bismuth, in connection with a carefully regulated diet. When it is due to the use of cod-liver oil, or to the milk or grape cure, the exciting cause must be discontinued, and the stomach, if overloaded, be emptied by an emetic. When it is due to inflammation of the stomach and intestines, he prescribes opium, nitrate of silver, perchloride of iron, etc., and employs also derivatives to the skin. For colliquative diarrhœa there is no remedy. For controlling the expectorations, he has found the balsams, glycerine, and kermes, to be the best remedies. For hæmoptysis, he recommends, in the first place, the use of emetics, and explains their action on the theory that they excite a reflex action through the sympathetic, which causes anæmia of the lungs, and controls the hemorrhage. When patients have been greatly reduced by the hæmoptysis, he has found quinine and ergotine useful.—*Allg. med. Cent. Zeit.*, February 25, 1880.—*Med. Record.*

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An Opinion on Blood-Letting.

It requires no little courage to confront the popular prejudice as Dr. Hiram Corson does in the following passage, taken from a paper on pneumonia communicated to the Philadelphia *Medical Reporter:*

"I have been in active practice continuously for fifty-two years, and during all that time have not once had occasion to believe that there was any change in the human system or in the climate, which made it more hazardous to treat acute inflammatory affections by means of cups or leeches and other anti-febrile remedies, than it was in the beginning of my career. I am therefore free to declare that it is just as safe to use them now, and they are quite as efficient, as they were in the days when the physicians of Philadelphia were using them so freely, with so much confidence and with so great success. Surgeons now perform fearful operations, by which not only is a great amount of blood lost, but the patient is also injuriously affected by the shock to the nervous system, yet the recoveries are oftentimes astonishingly rapid. Women in time of childbirth often flood until they are in the very presence of death, and yet, when it is arrested, they will in a few days be found as bright and cheerful as if nothing had happened, soon regain their usual strength and have no disability from their loss of blood. They bear it as well now as they did fifty years ago. Even those who would not bleed a woman in labor to save her from convulsions have no fear that she will suffer from a flooding which happened after the delivery of the placenta. A man may cut his leg and bleed till he faints, but no one feels that the mere loss of blood will do him any permanent injury; and yet what a hue-and-cry from these same people if a physician should bleed a person to remove a congestion of the brain, or relieve a pain in the head or a pleurisy. I have rarely met with a graduate of the last fifteen years who has ever used a lancet, and yet these are the very persons who are so opposed to its use. They regard the older physicians who do use it as persons who are ignorant of the "valuable new remedies" (which they believe were discovered about the time they began to study medicine), when the truth is they are themselves ignorant of nearly all the means of cure save veratrum viride, aconite, digitalis, a few cathartics, morphine, chloral and—I was near forgetting them—poultices; poultices for croup; poultices for diphtheria and scarlet fever; poultices for the liver, and poultices for the kidneys; poultices for the chest, and poultices for the belly; and when you ask them what effect they expect from these means, they have no answer but this: 'They are very much used in the hospitals now.' Is there any reason why physicians who practiced forty years ago should not know as much of all the above remedies as these men educated during the crusade against blood-letting? Digitalis was much used long since; forty years ago I used tincture aconite, with good effect in many cases, as did others who then practised; and as for newer remedies, does any one suppose that such men as Dr. John Atlee, Dr. Trail Green, Professor Gross and hosts of others—practitioners and close students—are ignorant of the reputed merits of these champion medicines?"

Treatment of Asthma by Electricity.

Dr. Max Schaeffer considers that the best remedy for cutting short an asthmatic attack is the local application of the induced current, which often causes the attack to disappear as if by magic, and is much more efficient than the pneumatic apparatus. According as the seat of the disease appears to be in the higher or lower parts of the nerve, the author applies the electrodes to both sides of the neck, under the lower jaw, about three quarters of an inch in front of its angle, or opposite the thyroid cartilage in front of the sterno-mastoid. The currents must not be too feeble. The patient must clearly perceive that the current goes straight through the soft palate or through the larynx. When the attacks are violent the current should be applied for a quarter or half an hour at least twice daily. As recovery takes place the applications may be shortened until they are at length made only once or twice a week. He rarely applied direct faradization, and found no good from the constant current.

Dr. Richard Schmitz reports the case of a patient, aged forty, who had been the subject of numerous and repeated attacks of asthma for eight years. At the time the electrical treatment was commenced the patient was suffering from a most severe attack, which had resisted all the ordinary methods, and had compelled him to sit for three days and nights without rest. Each attack was preceded by a catarrh, which successively invaded the larynx, trachea, and bronchi, and it was thought that the swelling of the mucous membrane of the respiratory tract might have involved the vagus in its course, and it was therefore considered necessary to direct the induced currents to this nerve. The first *seance* was at eight in the evening; the electrodes were applied over the alæ of the thyroid cartilage and internally to the sterno-mastoid. The current, at first weak, was gradually strengthened. The sitting lasted nine minutes, and the patient was so much relieved by it that he was able to sleep during the greater part of the night. On the next and succeeding days two more sittings a day were given, each of five minutes' duration. The good effects continued, and after twelve applications the patient was freed from the attacks of oppression and from the rales which embarrassed his breathing. Since the return of the patient to Hamburg he has had a fresh attack of asthma, which was cured without recourse to electricity; but in spite of this it appears that induced currents are useful, if not in alleviating the affection itself, at any rate in its most painful manifestations, and its effects should always be tried in obstinate cases.—*Deutsche Med. Wochen; Practitioner.*

Treatment of Indigestion and Heartburn.

In the course of an article in the *Practitioner*, January, 1881, Dr. J. Milner Fothergill writes:

For the purpose of whetting the appetite, and thus acting reflexly upon the gastric secretion, we employ the class of agents known as bitters. To these we add hydrochloric acid. Ringer has pointed out how an alkali taken into the stomach before a meal, when the stomach is alkaline, produces a freer flow of acid afterward. Consequently we comprehend the value of that well-known preparation indifferently termed, "Haust. Stomach," or "Mist. Mirabilis," or "Mist. Rhei et Gentian," in the various hospitals; a combination of world-wide fame. One drawback to this combination of rhubarb, gentian and soda is, that the student becomes familiar with it and its virtues, but remains ignorant of its exact composition, and so loses sight of it when he enters upon practice for himself. Such a mixture before meals, followed by ten drops of hydrochloric acid after the meal, will often make the difference betwixt imperfect digestion, producing discomfort, and digestion so perfect that it does not provoke consciousness. Or where there is much irritability in the stomach, *i. e.*, when a bare, red tongue, imperfectly covered with epithelium, suggests a like condition of the internal coat of the stomach, then bismuth is most soothing. The mixture of soda, bismuth and calumba is in use for such indigestion with good results. The dietary in such a case should consist of the blandest food, milk, with or without baked flour in it, beef tea with baked flour; nothing more, till an improved condition of the tongue tells of a more normal condition of the stomach. In such cases a plain opium pill at bedtime often soothes the stomach very nicely. Then there are cases where imperfect digestion is accompanied by the production of fatty acids, butyric and others, which add the phenomenon of "heartburn" to the symptoms; or there may be later products formed, which cause the bitter, hot taste in the mouth on awakening in the morning or after a post-prandial nap. It is usual to treat "heartburn" by the exhibition of an alkali, but this is not good practice. In union with an alkali the offending matter is nearly as objectionable as in the form of free acid. It is much better to give a mineral acid, as the hydrochloric or phosphoric, which breaks up the feebler organic acid. By such means we can aid the digestive act. Then at other times the indigestion is due to lithiasis, where the presence of uric acid impairs the efficiency of the gastric juice. In these cases all measures which do not entertain the causal relations of the dyspepsia are of little use. By the administration of potash in a bitter infusion, well diluted, taken half an hour before a meal, this element of trouble is removed. In all cases of gouty persons suffering from dyspepsia, do not forget this cause of impairment of the gastric juice.—*Philadelphia Medical and Surgical Reporter.*

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Therapeutic Uses of Tobacco.

In looking up the medical uses, etc., of tobacco, I find that very little mention is made in the various therapeutics of its employment as a constituent of poultices. Believing it to be a means of great value in certain painful affections, I desire to bring its use to the attention of physicians. Tobacco poultices were at one time rather generally used, but for some reason or other their efficacy has of late been lost sight of. I hope that the slight resurrection which I may occasion may prove of service to the profession.

A case or two from my note book will serve to illustrate the good effects of tobacco poultices.

Mrs. M., last fall, had intermittent fever, contracted through the ignorance of her physician in directing her, on the tenth day after confinement, to sit up the greater part of the day, and for nearly an hour to remain by an open window overlooking a large lot full of decaying leaves, weeds, animal matter, etc.

I was called in on the following day. Among the symptoms which presented themselves I found over the chest great tenderness and pain on the slightest pressure. I diagnosed this to be due to an irritated condition of the nerves or nerve-endings, and ordered flaxseed, mush and other poultices, one after another, but without avail. The pain still continued. I then gave medicine, belladonna, ointment, etc. I exhausted the list without giving relief.

I mentioned the case to my friend, Dr. J. V. Myers, of this city, who advised me to use a poultice of flaxseed and tobacco, equal parts, care to be exercised as to the toxical effects of the latter. I took advantage of the advice. The alleviation of the pain, which before the application was excruciating, was immediate and permanent. The relief was beyond my expectations. On the same patient this same poultice has on one or two occasions since done equally good and effective work.

Mrs. J. had an attack of perityphlitis. For the pain I ordered the usual medicines, together with mush and flaxseed poultices. These had no effect. I then had applied the poultice of flaxseed and tobacco. There was an almost instantaneous cessation of the agonizing pain from which, for two days, the patient had suffered.

I cite the two above cases, because I know that there can be no mistake, but that the tobacco was instrumental in doing the good work.

In all instances when a simple poultice does not meet the success desired, I add tobacco to it in the proportion of one-half. The leaves are the best for the purpose, but the various kinds of clippings in the manufacture of cigars, etc., will answer. The tobacco should be cut up finely, and then well mixed with the flaxseed; the poultice is made in the usual manner. A piece of linen or gauze is to be placed between the poultice and the body. Care must be taken that the part to which the poultice is to be applied is not denuded of its skin, for the tobacco may, in such a case, give rise to symptoms of poisoning. I think that with ordinary care there can be no danger; in my hands this poultice has proven of great value.

I would ask that the readers of the *Reporter* employ this poultice when indicated, in the stead of the simple flaxseed poultice, and report their success or failure, as the cases may prove to be.—*Philadelphia Medical and Surgical Reporter.*

New Treatment of Abscesses.

In the wards of Dr. Steven Smith a new treatment of abscesses has been very useful. When the abscess points it is opened and the contents evacuated. The cavity is then injected with carbolized water, and over-distended for two or three minutes. The water is then pressed out, and over the whole area undermined by the cavity, small, dry, compressed sponges are laid and bound down with a bandage. Carbolized water is then applied to the bandage and injected between its layers until the sponges are thoroughly wet, after which a dry bandage is applied over all. The sponges, by their expansion, make firm and even compression upon the walls of the abscess, and hold them in perfect apposition, thus favoring a union. The dressing is left on for five or six days, unless there is a constitutional disturbance or pain in the seat of the former abscess. It is found in most cases when the bandage is removed, that the abscess has completely closed by an approximation of its walls, and the external wound heals readily under a simple dressing of carbolized oil. A case was recently seen where this admirable result was secured in a child, although the abscess was a large one, originating in caries of the head of the femur, and opening on the outside of the thigh. No constitutional disturbance, no discharge, no reaccumulation, and no pain followed its use. Mammary and sub-mammary abscesses have been treated by this method with excellent results.—*Chicago Medical Review.*

Joborandi and Pilocarpin.

THE editor of the British Medical Journal gives the following *Resume* of the therapeutics of jaborandi (concluded):

Pilocarpin has been used with success in puerperal convulsions by Dr. Braun, who records a series of cases in which the most striking results were obtained. This mode of treatment has been advocated by Fancourt Barnes and others, although Fordyce Barker considers its propriety open to question.

Mr. Macnamara, in his recent work on Diseases of the Bones and Joints, recommends pilocarpin in septicemia and records two very striking cases.

Jaborandi has been employed with success in many chest-complaints. For an ordinary cold or slight attack of bronchial catarrh it is almost a specific. The patient is given a two-dram dose of the strong tincture, or half a grain of pilocarpin, at bedtime. Profuse perspiration is induced, and in the morning he is well. We have employed this mode of treatment in very many cases and with the happiest results. Dr. Berkart and Dr. Mackesy have recently advocated its use in asthma, both peptic and bronchitic. The loss of fluid resulting from the administration of full doses has been found of service in pleuritic effusion. Three cases treated by Dr. Hunt, of the Wolverhampton and Staffordshire Hospital, were reported in the British Medical Journal of May 1, 1880. Dr. Newland speaks highly of hypodermic injections of pilocarpin in pleuropneumonia. After an injection of five eighths of a grain the patient felt greatly relieved, and was able to lie down; his breathing became easier, he had no pain, and slept for four hours. The dose was repeated twice a day for three successive days, when the patient had so far recovered that further treatment was unnecessary.

Dr Murrell has recently called attention to the use of jaborandi and pilocarpin in the night-sweating of phthisis. He gives details of thirty-three cases in which it was administered with benefit. As a rule, the nitrate of pilocarpin was employed, and it was given by mouth and not hypodermically. The dose, with a few exceptions, was one-twentieth of a grain, either in solution in water or made into pills with sugar of milk. It was given only at bedtime, unless the sweating was very profuse, when it was repeated during the night. As a rule, but little improvement was noticed on the first night; but on the second and third nights the sweating was less, and by the end of a week had completely ceased. The perspirations when once checked did not, as a rule, return for many weeks. It was frequently noticed that the jaborandi or pilocarpin eased the cough and facilitated expectoration. Dr. Murrell recommends jaborandi in ordinary winter-cough, giving a full dose one or two nights at bedtime, and then smaller doses three or four times a day for a week or more. In chronic bronchitis, inhalations of jaborandi by a Siegle's spray-apparatus are decidedly beneficial.

Jaborandi has been recommended in diabetes insipidus, and in two cases under the care of the late Prof. Laycock, of Edinburgh, the patients were decidedly benefited by the treatment. In another case, reported by Dr. Ringer, the jaborandi, although given for forty-four days, in no way influenced the amount of urine secreted, while the liquid extract of ergot quickly reduced it to the normal. Good results have also been obtained in diabetes mellitus by hypodermic injections of pilocarpin frequently repeated. In one instance, after each dose, there was a striking diminution in the amount both of sugar and of water excreted, and this diminution lasted several days.

An attempt has been made to introduce jaborandi as an ecbolic, but for this purpose it has found but little favor with obstetricians. Mr. Clay published a case of contracted pelvis in which induction of premature labor was attempted by giving hypodermic injections of pilocarpin, but the result was unsatisfactory; and finally Barnes' bags had to be introduced and the forceps applied. It has been shown by Fancourt Barnes and others that in ordinary labor pilocarpin can not be used in place of ergot. Pilocarpin is sometimes employed to stimulate the secretion of milk in women who are suckling. The whole subject has been discussed in the pages of the British Medical Journal.

Professor Pick, of St. Petersburg, has published the results of two and a half years' experience of the use of pilocarpin in skin-diseases. He usually gives one sixth of a grain in solution twice a day, so as to induce slight perspiration, the treatment being continued for several weeks without intermission. The skin becomes softer and more pliable, scaliness diminishes, and the hair is less brittle. In two cases of pruritis senilis and one of urticaria a cure was effected; but in eczema, psoriasis, and alopecia areata the results were unsatisfactory. These results have been abundantly confirmed by Chadzynski and others. We have it on the authority of Dr. Schmitz, of Cologne, that pilocarpin possesses the peculiar property of stimulating the growth of the hair. It has been given with decided benefit in advanced syphilis. Mr. Lockwood, of the Lock Hospital, recently reported a series of cases treated by this method; and Prof. Lewin, as the result of a number of observations made on thirty-two prostitutes, confirms his results.

Dr. Ortille, of Lille, records a most obstinate case of hiccough in which pilocarpin gave relief after the failure of morphia, electricity, and numerous other remedies. In belladonna-poisoning, jaborandi promises to be of use, provided only that sufficient of the antidote be given. In one case it was found necessary to give hypodermic injections of pilocarpin, in all amounting to six and a half grains.

Hydroleine.

THIS preparation, to which the distinctive name of hydroleine (hydrated oil) has been given, is not a simple emulsion of cod-liver oil, but a permanent and perfect saponaceous emulsion of oil, in combination with pancreatin soluble in water, the saponification producing a cream-like preparation, possessing all the necessary qualities of chyle, including extreme delicacy and solubility, whereby a ready and perfect assimilation is afforded.

FORMULA OF HYDROLEINE.

Each dose of two teaspoonfuls, equal to 120 drops, contains:

Pure oil, ...	80 *m* (drops).
Distilled water, . .	35 “
Soluble pancreatin, . .	5 grains.
Soda, ...	$\frac{1}{3}$ grain.
Boric acid, ...	$\frac{1}{4}$ “
Hycholic acid, . . .	$\frac{1}{20}$ “

DOSE.—Two teaspoonfuls alone, or mixed with twice the quantity of soft water, to be taken thrice daily, with meals.

The use of the so-called emulsions of cod-liver oil during the extremely sensitive condition of the digestive organs always accompanying consumption does not usually afford beneficial results. Those of the profession in this country who have under their care cases of consumption, diabetes, chlorosis, Bright's disease, hysteria, and, in short, any disease where a loss of appetite is followed by a rapid breaking down of the tissues of the body in its effort to support the combustion supplying animal heat, are urged to give this preparation a trial. It is supplied by the agents for the United States, KIDDER & LAIRD, No. 83 John Street, New York, who will forward literature relating to the subject upon application.

MICROSCOPY.

Examination of Sputa.

IN suspected cases of phthisis where it is very desirable to know the progress made by the disease, great aid may be procured many times by an examination of the sputa of the patient. It is now a recognized fact that phthisis has been diagnosed, and is diagnosed in this way, weeks, months before other signs are manifest.

As expected ingredients in the sputa, one finds remains of food, starch granules, epithelium, air bubbles, mucous cells, pus cells, blood corpuscles, large granular cells, and, perhaps, pigment cells. If now besides these are found fragments of lung tissue, as yellow elastic fibers, it shows that there must be a disintegration of the pulmonary tissue, a condition which must denote serious trouble. If these fibers are not found it does not by any means prove that serious trouble may not exist, but their presence is very significant.

Some special directions should be given to the patient whose sputa we are about to collect. First, the mouth should be carefully and thoroughly rinsed and the teeth brushed after each meal. Second, the vessel in which the sputa is collected should be scrupulously clean. Third, if the patient is in the habit of using tobacco, it should be denied during the collection of the sputa, as the fibers of the leaf might mislead and cause a wrong diagnosis. If the amount of sputa is small, then all raised during the twenty-four hours should be saved. If large, that first raised in the morning should be preferred.

Any little grayish masses should be chosen and placed at once under a microscope. Acetic acid will clear up the mucous, etc., and render more distinct the yellow fibers if they are present. If this examination reveals nothing, the following method should be adopted:

Make a solution of sodic hydrate, 20 grains to the ounce of water. Mix the sputa with an equal bulk of this solution and boil. Then add to this mixture 4 or 5 times its bulk of cold water. If possible, pour into a conical-shaped glass and set aside. Soon the yellow fibers, if present, will fall to the bottom; from where they can be drawn up with a pipette and examined. Several glass slides should be examined at a single sitting, and the examination should be repeated every few days until the presence or absence of these fibers is satisfactorily demonstrated.

Methods of Examining Lung.

In order to study lung tissue, portions of fresh lung may be teased or picked, acetic acid or alkalies added, and examined at once. This shows readily the elastic fibers. The frog's lung may be inflated and dried as above, and thin sections made in every direction. The sections can be moistened, stained, and treated with the acetic acid, when quite satisfactory examination can be made. If possible, however, the blood vessels and the air passages should be fully injected. It is in this way only that one gets anything like an intelligent view. In the smaller animals the venæ cavæ are tied, and the nozzle of the syringe secured in the right ventricle. The left ventricle is opened to allow the escape of the blood as it is forced out by the injecting material. At the same time the injecting mixture is flowing in the vessels the lungs are partially expanded by means of a blow-pipe in the trachea or bronchus. In a few moments the opening in the left ventricle is closed to prevent the escape of any of the injecting mixture. The color of the lungs will decide when they are sufficiently injected. Prussian blue has afforded all that could be desired in our hands.

Then very small pieces of the injected lung are placed in melted cocoa-butter and allowed to remain there for two or three hours, when they are removed and the butter allowed to harden. Thin sections can be made with a razor in every direction, with or without the aid of a microtome. Instead of inflating the lungs with air, melted cocoa-butter may be used. Oil of cloves dissolves out the butter in a short time, when alcohol can be added to get rid of the oil. The specimens can be stained now with carmine or logwood, cleared in oil, and mounted in dammar. These organs may be hardened by injecting in the trachea, or one of the bronchi, a weak solution of chromic acid, one-sixth per cent.

Enough should be injected to distend the lungs slightly, when the trachea or bronchus should be tied and the whole lung placed at once into some of the same solution. The lungs must be cut in small pieces in a few days and placed in a fresh solution, either of the same strength or slightly increased. In a week or ten days the pieces are transferred to diluted alcohol and in a few hours to spirits of full strength. Sections can be made now, stained cleared and mounted. The lungs of embryos should be studied especially. Simple hardening in alcohol, staining and clearing, will be sufficient to enable one to recognize the structure of the whole organ.

Pigmented lungs or portion of lung are not uncommon. A fine, black, granular pigment is observed in the walls of the alveoli. This may be caused by small effusions from the pulmonary capillaries; yet it is almost invariably of extraneous origin, being composed of minute particles of carbon inhaled in the smoke and soot. The lungs of those employed in coal mines are made sometimes quite black by their inhaling particles of carbon in a finely divided state. Some of these particles may enter the lymphatics and be carried to the lymph glands of the bronchi, or more distant structures. Animals confined in a sooty room suffer the same pigmentation of their lungs.

If it is desired to examine lung tissue after it has undergone some of the progressive inflammations, small pieces should be hardened in chromic acid of Muller's fluid, and sections carefully made at the proper time.

Double and Treble Staining.

The process of using dyes of two different colors, so as to differentiate more clearly certain parts of a microscopic section of an organ, is, Dr. W. Stirling considers, of the greatest value, and can be employed with excellent results even by students. Having used various methods for the last three years, he now gives a brief account of those combinations of colors which he has found to be most useful for class purposes, and the organs for which each combination is best suited.

(1.) *Osmic Acid and Picrocarmine—Blood of a Newt or Frog.*—Mix a drop of blood with a drop of a 1 per cent. aqueous solution of osmic acid, and allow the slide to stand. This "fixes" the corpuscles without altering their shape. At the end of five minutes remove the excess of osmic acid with blotting-paper, add a drop of solution of picrocarmine and a trace of glycerine to prevent evaporation, and set aside for three or four hours (or even longer, as no overstaining takes place). At the end of this time the nucleus will be found to be stained red, and the perinuclear part homogeneous and yellow.

(2.) *Picric Acid and Picrocarmine—Blood of a Newt or Frog.*—Place a drop of blood on a slide, and add a drop of a saturated solution of picric acid; put the slide aside and allow it to remain for five minutes, and at the end of that time, when the acid has "fixed" the corpuscles (that is, has coagulated their contents), the excess of acid should be removed by means of a narrow slip of blotting-paper. A drop of a solution of picrocarmine should now be added, and a trace of glycerine to prevent evaporation, and the preparation set aside for an hour. At the end of that time remove the picrocarpine solution by means of a slip of blotting-paper, and add a drop of Farrant's solution or glycerine, and apply a cover. The preparation may then be examined, when the perinuclear part of some of the corpuscles will be seen to be highly granular and of a deep yellow color, while the nucleus is stained red. In some of the corpuscles there may also be seen delicate yellow-colored threads, extending from the nucleus to the envelopes; in others, the perinuclear part remains uniformly homogeneous. This and the above preparation of blood-corpuscles can be preserved in glycerine.

The process for *Yellow Elastic Tissue*, *Yellow Fibro-Cartilage*, *Fœtal Bone,* and the *Aorta* are also described.

(3.) *Picrocarmine and Logwood.*—Stain the sections first with picrocarmine, and after staining wash them in water slightly acidulated with acetic acid. Stain them with *dilute logwood* solution till they assume a lilac tint. Wash them, and mount in glycerine or dammar; the great point is to avoid overstaining the sections with the logwood. This method does very well for skin, scalp, developing bone, and the non-striped muscular fibres of the mesentery of the newt.

(4.) *Picrocarmine and an Aniline Dye.*—Dr. Stirling has tried a great variety of the aniline dyes, but finds none of them so good, at least for gland tissue, as iodine green; it is used in the form of a 1 per cent. water solution. Stain the tissue in picrocarmine, wash it in water acidulated with acetic acid, and then stain it in a solution of iodine green. This solution stains rapidly, and care must be taken not to overstain the tissue. Rapidly wash the section in water, and mount it in dammar. The section must not be left too long in spirit before cleaning it with clove-oil, because the spirit dissolves the green dye. Specimens doubly stained in this way have been preserved for many months, and students succeed in the process with the best results. Few methods yield such good results and are so instructive for the purpose of teaching. All preparations stained with iodine green must be mounted in dammar.

(5.) *Picrocarmine and Iodine Green.—Fœtal Cancellous Bone.*—Stain a section of the cancellated head of a fœtal bone in picrocarmine, and after washing it, stain it with iodine green and mount it in dammar. All the newly formed bone is red, but in the center of each of the osseous trabeculæ the residue of the calcified cartilage on which bone is deposited is stained green. No method differentiates so clearly this marked difference in the constitution of these trabeculæ. Many of the bone corpuscles are stained green.

Mounting Desmids.

Dr. M. C. Cooke, in dealing with the subject of mounting desmids for the Microscope, considers that the preservation of the endochrome and its color is a matter of minor importance. For scientific purposes the empty frond is often of superior value to one filled with endochrome, as it permits the punctæ or markings of the segments to be seen, which are obliterated whilst the endochrome remains, and in the genus *Cosmarium* this is of greater importance than ever.

For the study of the endochrome alone its presence is of course most important; but this can be done, and drawings made from the plant in the living state, and if specimens can be mounted with the endochrome unchanged and uncontracted, so much the better, but no method has yet proved entirely satisfactory. Dr. Cooke kept some slides for twelve years mounted in silicates of potash and soda, but half of them deliquesced. Mr. Wills, however, kept slides much longer by simply using the water in which the Desmids were collected and never leaving them exposed to the daylight.

One great difficulty in mounting objects with such thin and delicate cell-walls as desmids is to employ a medium of no greater density than the cell-contents. If a denser medium, such as glycerine, be used, the endochrome immediately contracts, and never expands again as before. Water, or water containing a little camphor,·is of equal density, and no change can be detected.

After all, the preservation of the endochrome is of less importance than the perfect contour of the cell. If there is any contraction or collapse, the objects are useless. Supposing, therefore, that there is no necessity to preserve the endochrome, there is another feature to remember besides the preservation of contour, and that is, that the medium employed should not render the delicate cell-walls so transparent as to become ultimately invisible. In simple water Dr. Cooke, found no difficulty in discerning the structure of the cell-walls after a period of not less than twelve years. So much can not be said for glycerine. Empty fronds, both of desmids and *Volvox*, stained of various colors, exhibit all the details in an unexceptionable manner.

GLEANINGS.

LICHEN RUBRUM EXUDATIVUM TREATED BY SUBCUTANEOUS INJECTIONS OF ARSENIC.—Kroeber exhibited to the Berlin Medical Society a joiner, aged 39. who had been suffering for a year and a half from this affection, and who had been treated with marked success by injections of Fowler's solution. The patient was first seen in May, 1880, when his back, from neck to lower border of thigh, his breast and abdomen, and, in less degree, his arms and forearms, were covered with innumerable dark-red, firm, shining, and for the most part conical-shaped elevations, which in some situations became confluent. The excessive itching prevented sleep, and the patient was consequently much debilitated. On account of the weakened condition of the patient, it was considered unadvisable to administer internally the large doses of the remedy required in the treatment of this disease; consequently the subcutaneous method was selected. A mixture of liq. potass. arsenit., one part, aquæ destill., two parts, was employed, of which 0,58-0,82 (once 1,16) was administered daily. In five days 1,28 grm. of Fowler's solution, altogether, was injected. The patient had quiet nights after the first injections, whereupon he absented himself for a time. Returning afterward, during eighteen days, 2,61 grm. more of the Fowler's solution was injected—this time diluted only with equal parts of water. After the third injection, the itching diminished markedly; after the fifth, the entire eruption was paler and flatter, and finally the itching entirely disappeared, the patient slept excellently, and only exhibited on his trunk some brown spots, with a trace of flat elevations under the right scapula. Five and a half months later, the patient's general condition was good, and there had been no relapse.—*Deutsche Med. Wochensch.*

DIFFUSE INFLAMMATION OF THE EXTERNAL AUDITORY CANAL.—Mr. E. C. Baber, M.B., of Brighton, in a paper on this subject (British Med. Journal), states that the disease must be distinguished from the circumscribed variety where small abcesses form in the meatus. In diffuse inflammation the walls of the meatus swell uniformly, so that often the smallest speculum can not be introduced. When the swelling subsides slightly a speculum well flattened at the inner end will show the tympanic membrane recognizable only by its position, the manubrim of the malleus and the light spot being hidden by the thickening through inflammation of the epidermic layer of the membrane. Free secretion often exudes from the walls of the meatus without any perforation existing in the membrane. It is most important to diagnose this complication in healing this disease. For treatment leeching is useful, and care must be taken that the lèeches are applied close to the ear. Incision of the inflamed tissues in the meatus is necessary when the case is severe, with danger of the adjacent bone being affected. An hourly injection of from five to ten drops of a solution of acetate of morphia (sixteen grains to the fluid ounce) greatly relieves the pain. In the chronic stage the surgeon should frequently cleanse the meatus with cotton wool. This is less irritating than the syringe. Glycerin of borax is the best lotion for injection.

THE CURE OF VARICOSE VEINS BY SUBCUTANEOUS LIGATURE.—Dr. John Duncan, of Edinburgh, employs carbolized catgut for the radical cure of varicocele (British Med. Journal). The veins are separated from the artery and vas deferens, and a needle armed with catgut is thrust through at the point of separation; it is then reintroduced at the orifice of emergence, made to pass between the veins and the skin, and brought out at the original entrance; the two ends are then firmly knotted together and cut short. By traction on the scrotum the knot is made to disappear entirely, and the punctures are covered with salicylic wool saturated with collodion. The same maneuver is repeated an inch higher and sometimes a third ligature is advisable. A hard lump of coagulum forms between the ligatures, tender at first, but soon diminishing in size and becoming insensitive. Dr. Duncan treats varicose veins of the leg in the same manner; the introduction of the point of the needle into the aperture of exit of the first puncture and the tightening of the loop of catgut is difficult when there is brawny edema. In such cases the patient should be kept at rest and an India-rubber bandage applied for a few days. A single ligature is not sufficient, and to close the lumen permanently two must be applied about one inch apart. It is essential that no branch be given off in the segment of vein between the ligatures.

Treatment of Delirium Tremens.—Dr. Villard reports a case of delirium tremens which he treated successfully by means of hasheesh after the administration ineffectually of chloral and opium. Dr. Villard has thus been able to add further testimony as to the value of this remedy, which appears to be less used in France than it is in this country. In the case reported, chloral hydrate in five grain doses, which was absorbed in ten hours, was useless, while extract of opium in quantities of fifteen to twenty centigrams (two and one-fourth to three grains) every twelve hours, continued for two days, was found equally futile in controlling the symptoms. Two dessertspoonfuls of julep, containing fifty centigrams (gr. vijss) of hasheesh, given hourly, was, however, at once found to have a tranquilizing effect.—*Le Progres Medical; London Practitioner.*

[It would be safer in any case to commence with a smaller dose of the Indian hemp, increasing the quantity till the desired effect should be obtained].

Chloral Hydrate in Dysentery.—Dr. Curci (New York *Med. Record*) employs successfully chloral hydrate in the treatment of typhoid diarrhea and dysentery. In the latter disease the remedy is combined with potassium chlorate. Using barley-meal water for menstruum, he gives the chloral to an adult in from fifteen to forty-five grains daily by mouth. Given by rectum, one dram and a half of chloral to two quarts of barley water will serve for ten clysters. Before administration by mouth a light purge should be given.

Dr. C. states that besides being narcotic, chloral is sedative, astringent, anti-diarrheic, coagulent, and antiseptic. It calms the cerebral centers as well as the sympathetic, which latter above all is effected in dysentery. By reason of its influence over the sympathetic the peristaltic action of the intestines is diminished and the pain relieved.

BOOK NOTICES.

CLINICAL LECTURES ON THE DISEASES OF OLD AGE. By J. M. Charcot, M. D., Professor in the Faculty of Medicine, of Paris, Physician to the Saltpetriere, etc. Translated by Leigh H. Hunt, B. Sc., M. D., Instructor in the University of the City of New York. With additional Lectures by Alfred L. Loomis, M. D., Professor in the Medical Department of the University of the City of New York. 8vo. Pp. 280. New York: Wm. Wood & Co. Cincinnati: H. Stacey.

This volume is the sixth of the series of twelve volumes of "Wood's Library of Standard Medical Authors" for 1881.

Just such a work as this, we have no doubt, every practitioner, who has been in practice for a considerable length of time, has felt the need of. Old people are not only liable to the ordinary diseases, but they are also liable to diseases peculiar to themselves. And, besides, age modifies the treatment of all diseases. Fatal would the result be, generally, if the same treatment was instituted in a pneumonia, in a person of seventy years old, that would be proper to be employed in an individual of thirty-five or forty years of age. A modification would be necessary that could not be explained by differences in strength. The modifying conditions of age are peculiar, and can only be learned by their separate study. We have numerous works on diseases of children; for there are not only diseases peculiar to childhood, but it is well known that the infantile state has a modifying influence, that must be recognized in the treatment of all of the complaints of infancy. But there is no greater need for separate works on diseases of children, than there is for the diseases of old age. Prof. Charcot very correctly observes:

"The importance of a special study of the diseases of old age can not be contested at this day. We have come to recognize in reality that, if the pathology of childhood countenances clinical considerations of a special kind, and if it is indispensable that it should be known from a practical point of view, then also senile pathology presents its difficulties, which can not be surmounted except by long experience, and a profound acquaintance with its peculiar characteristics.

"And yet, gentlemen, this very interesting portion of medicine has been neglected for a long time, and has only succeeded in obtaining its autonomy in our day.

"It was at an epoch very near ours, in France and in this very hospital, that the pathology of old age was constructed and asserted, if I may be allowed the expression, in all of its originality. Before that time one could scarcely cite a work in which the slightest indication could be found of the particular physiognomy of the diseases of old age. If you except the little treatise of Flayer, published in 1724, the more recent work of Welsted, and lastly that of Fisher, which dates as far as 1766, most of the medical works of the past century which touch, in a special manner, upon the senile period of life, have a literary or a philosophical bearing; they are more or less ingenious paraphrases of the famous treatise, 'De Senectute' of the Roman orator.

"It was reserved for Pinel to point out, if not to fill up the gap, at the epoch when he wrote his 'Treatise on Clinical Medicine.'"

The work of Prof. Charcot is composed of some thirty lectures, in which all of the diseases to which old people are liable are exhaustively treated. The lectures, which we think will be found particularly interesting, are those on nodular rheumatism, and rheumatism generally; symptomatology of chronic progressive articular rheumatism; clinical importance of thermometry in old age; senile pneumonia, in regard to which there are two lectures, and senile chronic catarrh; cerebral softenings; cerebral hemorrhage, and senile hypertrophy of the prostate gland. In mentioning these lectures we do not wish to detract from the merits of other lectures, for they also are highly interesting and valuable.

The lectures on senile pneumonia, and catarrh, and some eight other lectures are by Prof. Loomis, of this country. The work will add greatly to the value of the series of 1881, of Wood's Library of Medical Authors.

A Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs. By Samuel W. Gross, A. M., M. D., Lecturer on Venereal and Genito-Urinary Diseases in the Jefferson Medical College, etc. 16 Illustrations. 8vo. Pp. 174. Philadelphia: H. C. Lea's Son. Cincinnati: R. Clarke & Co.

This work is by the son of the venerable and very distinguished surgeon who has obtained so illustrious a name throughout the world.

The work before us is quite an important one, and will doubtless be studied with much interest by all interested in the diseases of which it treats. There is no little ignorance prevailing in regard to the affections of impotence and spermatorrhea, from a misapprehension of their pathology, and we have no doubt that the work before us will do much in the way of relieving it. The author seems to have given these affections a great deal of study, and has consequently evolved a good many facts, which will aid much in the way of successful treatment. He shows very conclusively that these diseases of the venereal organs are the result of reflex disturbances of the genito-spinal center, and are almost invariably induced or maintained by appreciable lesions of the prostatic portion of the urethra, and are not, as usually described, consequent upon functional affections of the testicles.

The author's aim has been to supply in a compact form, as he states, practical and strictly scientific information, especially adapted to the wants of the general practitioner, in regard to a class of common and grave disorders, upon the correction of which so much of human happiness depends, and he has certainly succeeded to an extent to afford him much satisfaction.

If the general practitioner will procure this work and study it, he will be able to do a world of good to the very many who consult him in regard to impotence and spermatorrhea, and whose minds are tortured and lives made unhappy in consequence of the impression that the *manly principle of manhood*, virility, has been destroyed, and, without it, they oftentimes care but little about living. With the loss of virility, with very many, there is attached a feeling of mortification, humiliation and self-debasement, that overcomes the instinctive desire to live. The family physician is the one who should know how to treat such a case, but not unfrequently, through his ignorance, unable to afford relief, the patient falls into the hands of the quack, by whom he is both made worse and robbed.

In chapter first the author treats of Impotence, dividing it into "Atonic Impotence," "Psychical Impotence," "Symptomatic Impotence," "Organic Impotence." The second chapter treats of sterility, in which is described the composition of the semen, spermatozoo, functions of the prostatic fluid, etc.; also AZOOSPERMISM, the various deformities of the penis from different causes, obliteration of the epididymis and bas deferens.

But we have not the space to describe the various conditions that pertain to impotence and spermatorrhea, of which the work treats. They are all fully discussed—their pathology lucidly described, and the treatment given which observation and experience has proven to be the best.

A NEW FORM OF NERVOUS DISEASE, TOGETHER WITH AN ESSAY ON ERYTHROXYLON COCA. By W. S. Searle, A. M., M. D., 132 Henry St., Brooklyn, N. Y. Fellow of the Medico-Chirurgical Society of New York, etc. 16mo. Pp. 138. New York: Fords, Howard & Hulbert. Cincinnati: R. Clarke & Co. Price, $1.00.

The author of this work claims that he has discovered a new disease of the nervous system, not before recognized or described. In the preface there is printed a letter from Charcot, of Paris, acknowledging the claims of the author to be valid.

This new disease is characterized by two principal phenomena, one or both of which are always present, and both of which are sure to occur, sooner or later, if the disease is not cured.

One of these phenomena is a sensation of sudden *shock*, or *blow*, or *explosion* in some part of the head, usually the occiput, usually accompanied by *intense vertigo*. The other distinctive phenomenon is a condition of passive congestion, usually of the cerebellum only, but sometimes extending, on the one side, to the cerebrum, and, on the other, to the upper portion of the spinal cord.

The shock is always followed, and sometimes preceded, by the congestion, but the latter is always aggravated by the occurrence of the shock. The congestion is very protracted. It may precede the occurrence of shock for a year or more, and it often fills the entire interval between the shocks, but it is usually the first of the two phenomena to disappear in the progress of cure. Not seldom it is the sole symptom, shock never being developed.

Time and further research will prove the justice of the claim of Dr. Searle of a new discovery in nosology.

The latter third of the work is devoted to a description of the physiological effects upon the system of Erythroxylon Coca. The account is highly interesting indeed. The article having such a terrible name is a plant which has its habitat in Peru, S. A. It is said to increase greatly the powers of endurance—those eating a given quantity of the leaves being able to go without food or drink several days, and endure at the same time great bodily exertion. Dr. Searle is disposed to introduce it into this country, to take the place of tea and coffee—making an infusion of the leaves.

THE MOTHER'S GUIDE IN THE MANAGEMENT AND FEEDING OF INFANTS. By John M. Keating, M. D., Lecturer on Diseases of Children at the University of Pennsylvania, etc. 16mo. Pp. 118. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co. Price, $1.00.

This little work contains a fund of most valuable information in respect to the management of infants. Every physician, mother and nurse should have a copy of it, and attentively peruse it. There is far more complexity in the nursing of children than is generally supposed. The knowledge involved does not come by intuition, but is only gained by long experience and observation. We have no doubt, if more intelligence was observed in bringing up children, thousands of lives would be yearly saved that are now lost through ignorance.

This little work gives full information in regard to the care of infants after birth—washing, attention to navel, nursing, mother's milk, injurious effects of alcohol when used habitually to give milk, laxatives for mother and child, wet-nurses, bottle-feeding, how to keep milk fresh, use of farinaceous foods, condensed milk, bathing of infants, temperature of water, milk eruptions, character of clothing, etc. Along with these subjects many others, which we have not space to mention, are discussed, having reference to the infant previous to dentition. The second part is devoted to the consideration of infancy during dentition. In this division of the work very much valuable information is given. Lancing of the gums is treated of, use of opium, convulsions, food, fresh air, bathing, and many other topics. Part third treats of infants after early dentition. It contains two chapters, giving most important information. As we have stated, the work will be found a valuable one for physicians, mothers and nurses.

EDITORIAL.

PARTIES who advertise will consult their interests by advertising in a well-established journal—not one just commenced, nor one that has lived out its day of usefulness and is kept alive by occasionally buying up the subscription list of a defunct contemporary. It is better to pay a reasonable sum for space in a journal of large *bona fide* circulation than a very small sum in a journal of scarcely any circulation.

THE MEDICAL NEWS is the cheapest medical journal to advertise in of any medical journal in the West—not because it charges less per page, but because it has the largest circulation. Those who advertise in it usually continue their advertisements so long as they continue to advertise in any journal. In looking over the advertising form it will be observed that not a few of the advertisements have been appearing for years.

We hereby append the post-office law in regard to periodical publications. By noticing it, and keeping it in mind, hard feelings would sometimes be avoided:

UNITED STATES POSTAL LAW.—1. A postmaster is required to give notice *by letter* (returning a paper does not answer the law) when a subscriber does not take his paper out of the office, and state the reasons for its not being taken. Any neglect to do so makes the postmaster *responsible* to the publishers for payment.

2. Any person who takes a paper from the post-office, whether direted to his name or another, or whether he has subscribed or not, is responsible for the pay.

3. If a person orders his paper discontinued, he must pay all arrearages, or the publisher may continue to send it until the payment is made, and collect the whole amount, *whether it be taken from the office or not.* There can be no legal discontinuance until the payment is made.

4. If the subscriber orders his paper to be stopped at a certain time, and the publisher continues to send, the subscriber is bound to pay for it *if he takes it out of the post-office.* The law proceeds upon the fact that a man must pay for what he uses.

5. The courts have decided that refusing to take a newspaper and periodicals from the post-office, or removing and leaving them uncalled for, is *prima facie* evidence of intentional fraud.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—At this writing this organization has just opened its session in this city. There is promise of a very large gathering of scientists, and that the meeting will be a most interesting and profitable one. Among other men of science, microscopists have commenced coming in.

Of those who will make displays, and are already getting their exhibits in order, are Mr. W. H. Bulloch, of Chicago; Mr. W. H. Walmsley, of Philadelphia, representing R. & J. Beck, of London; Mr. Lomb, of Bausch & Lomb, of Rochester, N. Y., and Mr. E. Gundlach.

The display of Mr. Walmsley will be very large, indeed. He displays, of course, the Beck "International" and other smaller stands, together with a numerous series of objectives. Mr. Bulloch, of Chicago, shows his magnificent "Congressional" stand, and other smaller ones. The "Congressional" is certainly a superb stand, having all of the modern improvements, and every convenience that one could possibly desire in a microscope stand.

The Messrs. Bausch & Lomb will make a very fine exhibit, indeed, with their superior stands and excellent objectives and accessory apparatus. They have brought out some quite valuable improvements in the way of a dissecting microscope and turn-table, and some other instruments. In a subsequent number of the NEWS we will describe these inventions at length. This house makes some very fine lenses, at a low price—lenses that are capable of the finest work. Mr. Edward Bausch, we believe, superintends the making of objectives, having attained to great skill in that direction.

It is greatly to be regretted that Dr. J. J. Woodward, of Washington, will probably not be present in consequence of being in attendance upon President Garfield, who is at this time in a very low condition, with a prospect of soon dying. When Dr. Woodward's thorough knowledge of optics is considered, his wonderful skill as a manipulator of the microscope, his numerous inventions of accessory apparatus, his extensive employment of the photograph in conjunction with the microscope, and the improvements he has made, by which he has been enabled to take photographs of microscopic exhibits by the most powerful and finest lenses, and for other reasons, he stands confessedly at the head of the microscopists of the world. There are other distinguished microscopists in this country. So there are those of great eminence in England, as Carpenter, Beale, Hogg, Tyndall, etc.; and in France and Germany; but, purely as a microscopist, Dr. Woodward beyond doubt excels all.

Besides microscopic exhibits, Prof. Ward, of Rochester, exhibits his monsters. One of them is a mammoth, sixteen feet high.

As the visitor enters the hall nothing attracts his attention so much as the object in the center of the room. It is the mammoth, one of the most remarkable objects which has ever been exhibited in this country, and certainly the most remarkable ever seen in Cincinnati, Figures can give no adequate idea of his size, yet the figures must be given. He stands sixteen feet high, and, counting the forward curve of his tusks, is twenty-six feet long. His body is thirty-six feet in circumference; the sole of his foot three feet in diameter; the tusks are fourteen feet long, and one foot in diameter at the base. The whole body is covered with dark, shaggy hair, and under the throat it is from twelve to fifteen inches long. Never before was such a monster seen, and one stands aghast at the sight and wonders if the whole is not a stupendous fraud. But it is not a fraud, and the wonder excited is universal. When exhibited at Chicago, two Irishmen were overheard talking about it. After gazing for some time in perfect astonishment, one said to the other: "An' faith, Pat, an' how did they get the baste here?" "Arrah, bedad, ye fool, they druv him here, an' kilt him." In looking at such a colossal animal one is inclined to question the fact of any such beast ever having lived on the earth. But the evidence is so positive and conclusive that there can be no doubt of it. The history of the mammoth is as follows: For many years gigantic bones have been found in various parts of Europe, supposed at first to be those of giants. Their true character was at length recognized, but no one could imagine how the animal looked. At length Herr L. Martin, a constructor of natural history specimens of Stuttgart, conceived the idea of a restoration of the animal from these bones. Under the direction of Dr. Oscar Fraas, the director of the Palæontological Department of the Royal Museum of Stuttgart, he commenced the work. Taking the largest of the bones from the museum, laying them together and making careful measurements, they arrived at the size and form of the great animal. From these measurements the restoration was made, and the frame of the animal at last stood forth in all its glory. But the next thing was the skin. What kind of hair did the animal have? Here they had the most reliable data to guide them. For many years ivory had been found in large quantities on the northern shore of Siberia. It was extensively collected and taken away by shiploads. In 1799 a fisherman by the name of Schumahoff was exploring the coast for ivory. Near the mouth of the Lena River he noticed a huge black mass imbedded in a large block of ice. It was too deeply imbedded for him to discover its character. In 1801 the melting of the ice had disclosed a portion of the carcass. In 1804 it was completely disengaged, and the following year the fisherman cut off its tusks, weighing 300 pounds, and sold them to an ivory merchant for fifty rubles. In 1806 Mr. Adams was traveling and collecting in Siberia for the St. Petersburg Museum, and he found part of the carcass on the shore. The inhabitants had been allowing their dogs to feed on the flesh, and the skin was nearly gone, and one fore leg was missing. Everything of value was collected, including thirty pounds of fur, transported to St. Petersburg, the tusks repurchased, and the whole mounted in the museum, where it now stands, one of the most valuable and unique specimens in the world. It was from the hair found on this mammoth that Herr Martin took his idea, and the hair on the restoration is as close a copy as it was possible to make. During one of his many trips to the Old World, Prof. Ward saw the monster animal. With his characteristic energy he immediately proposed to purchase it and transfer it to America, but the price asked, about $15,000, was too much even for him. On his return from his African trip he made an offer of a smaller sum, and it was accepted. He immediately repaired to Stuttgart, employed ten men for six days in taking the animal to pieces, packed it in fourteen enormous boxes, and shipped it to Rochester. The weight was 14,694 pounds, and the freight alone amounted to $768. Thus was the great curiosity brought to America, and since its arrival here it has been exhibited in several cities, and attracted universal attention. At the Chicago Exposition it was said that the crowd was always greatest around the mammoth, and thinned out in all directions from it. During our coming Exposition it will form the attractive feature, and will undoubtedly be the drawing card of the whole show.

UNNECESSARY SURGICAL OPERATIONS IN THE TREATMENT OF THE DISEASES OF WOMEN.—Dr. Clifton E. Wing, of Boston, has sent us a pamphlet in which he contends that there is entirely too much treatment of diseases of women. We are also disposed to think so. A few years ago there was scarcely a specialist for such diseases; and many intelligent physicians would not have known what the term gynecologist meant. Now they are to be found on almost every square in cities, and some squares have half a dozen. Every village, too, has from one to half a dozen. All of them claim to have a large business. How is it? Can it be that female diseases increase in population as the gynecologists increase, or do gynecologists increase in consequence of the increase of female diseases? It almost seems that the former is true, for, in our memory there has been a time when a female operation was scarcely heard of. Now and then a case of cancer of the womb would occur in a whole county, or a vesico-vaginal fistula as the result of the ignorance of an old midwife. Once in a decade, in an extent of territory embracing one third of a state, an ovarian tumor would be heard of. Besides these, except now and then, a case of leucorrhea presented itself which yielded immediately to simple treatment, or a case of disordered menstruation from cold consulted him, a physician would practice a lifetime without meeting a case of female disorder. If gynecologists exist now in such great numbers, simply because they are demanded by the necessities of the times, springing up as they have in only the last few years, for previously none existed, the increase in female diseases is really alarming and the causes should be investigated.

Says Dr. Wing in his pamphlet: "That there exists at the present time, among those who practice the treatment of the diseases of women, too great a love for operative procedures, is an opinion frequently heard expressed by members of the medical profession." He then proceeds to express it as his opinion that gynecologists often operate, when no operation is necessary, for the purpose of increasing their fees; since, for the performance of anything which can be called "a surgical operation," the fees are much greater than the amounts ordinarily earned in the honest treatment of cases by other and simpler means. While this may be true in many instances, for, in a profession as large as that of the medical profession, there must not be a few unscrupulous men, yet we are disposed to believe that a good many physicians, who have set themselves up as gynecologists, are disposed to persuade silly women that they have female complaints where there is nothing of the kind the matter—more for the purpose of having something to do than for actual gain, although they feel it incumbent upon themselves to charge a fee. And in very many instances they very probably persuade themselves to believe that a party has a disease peculiar to her sex, for it is not difficult to believe what one desires to believe. Many women have a morbid disposition, as it were, to regard themselves as affected with some disorder of the sexual organs; and, in this way, to account for every ailment. Such are constantly running to the offices of gynecologists, where they too often receive encouragement in their notions whether correct or not. We know most respectable ladies, having all the external appearance of good health, and going about all the time, who are constantly being treated by gynecologists, being under the care of one for awhile and then of another.

One specialist will treat for same ovarian difficulty, another will say that there is chronic pelvic cellulitis, and another will assert some other malady. We may be in error, but we often feel confident that in some of the cases, if the patient's mind could be drawn from herself and directed to some domestic pursuit, all signs of disease would soon cease.

We also agree with Dr. Wing that an abnormal condition may often exist that produces us inconvenience, and, therefore, requires no interference. Of course, if the perineum is torn through, serious results will be apt to follow soon, for the perineum is an essential support to the contents of the pelvis; but practitioners of long experience know instances of partial laceration of perineum, produced years before, that are unaccompanied by troublesome symptoms; and we have in our mind a case, where a laceration occurred in a first labor, as the result of the use of forceps, which extended into the rectum a short distance, which very remarkably produces inconvenience only occasionally. But where is the gynecologist who will not advise an operation in any degree of laceration? The lady whom we have just mentioned, has been actually harassed by different gynecologists to have an operation.

In conclusion, we will observe that there is entirely too great a propensity to meddle with the female organs of generation—*i. e., for the purpose of remedying supposed maladies.* Of course we would not charge a physician with any but honest motives in all of his dealings.

MEDICINE IN GERMANY IN 1830.—At the present time it seems to be pretty generally conceded that the Germans hold a first position in the cultivation of a number of the departments of medicine, especially in minute anatomy, physiology, pathology, medical chemistry, etc.; but Prof. Charcot, in his work on the "Diseases of Old Age," places them far down in the ranks of progress half a century ago. He admits that now, however, they have redeemed themselves to a great extent. We quote from him as follows:

To place in its true light the favorable influence which, in another way, scientific tendencies might exert upon the advancement of medicine, it is sufficient for me to recall to your minds the remarkable transformation which this science has undergone during the course of the last twenty years in a neighboring country of ours—in Germany. Let us, for a moment, cross over to the other side of the frontier, and in thought go back to about the year 1830. At that time Shelling and his daring 'Philosophy of Nature' ruled as absolute lords over the German minds. Poetical notions and transcendental conceptions were then the fashion, and a physician even permitted himself, in a treatise on mucous fevers, to seriously compare a blood globule with the terrestrial sphere, because both were round, flattened at the poles, and both possessed a central nucleus surrounded by an atmosphere.

"During that time medicine was reduced to a deplorable condition, although the Germans possessed translations of the principle works relating to pathology, which had just been published in France or England; still the progress accomplished by these last named countries was for the Germans as though it had never happened, for no one understood the importance of it. Physical diagnosis had never been formulated, either in the hospitals or private practice.

"In more than one German university the stethoscope was almost unknown. When they accidentally ran across one of these instruments, they examined it with a sort of infantile curiosity; or again, they greeted with sarcastic jests those few eccentric ones who, by means of this bit of wood, pretended to hear *unheard* of things. Besides, most of the diseases of the chest and heart, and chronic affections of the skin, were an almost unexplored region.

"Even when they began to take notice of the French, it was only to turn to ridicule, and this time with the appearance of justice, that strange mania which impelled them to consider all diseases as inflammations.

"Things remained in this state until about the year 1840; then the work of regeneration commenced, chiefly through the influence of Schœnlein, by the importation of French methods, and their intervention in the domain of the clinic. Then it became the time of pathological anatomy, brilliantly represented by Rokitausky. But Müller had already appeared with his physiology, and soon he created pathological histology, which was to remain for a long period an almost exclusive German Science.

"Gentlemen, you know the rest. Then the German universities presented the spectacle new to them, of an almost unheard-of feverish activity; and you are not ignorant of the fact, that the feverish labor, which even now does not show any signs of diminution, has already produced more than one fundamental work."

COMETS PRECEDE NATIONAL CALAMITIES.—We recently had a comet in view; it has only been a few weeks since it disappeared from sight. The tragedy at Washington calls to mind what was said by Alexander Howell, who graduated at Harvard University, 1664.

> "Comets (say Naturalists) proceed from natural causes, but they oft precede preternatural effects. That they have been Antecedents to strange consequents is a universal truth, and proved by particulars, viz.: That which hung over Hierusalem before its extirpation by Vespatian, that vertical to Germany, before those bloody wars, etc. So that experience Attests, and reason Asserts, that they have served for sad Prologues to Tragical Epilogues. For the future, preludiums to what events they'l prove, may be proved by consequence, if they han't suffered a privation of their powerful Energie."

The comet of 1680 is described in John Foster's Almanac for 1681 as being visible to the naked eye in Boston, from November 19 to February 10, 1681, when it faded out of sight:

> "And thus is this prodigious Spectacle removed, leaving the world in a fearful expectation of what may follow: sure it is that these things are not sent for nothing, though man can not say particularly for what: They are by most thought to be Fore-runners of evil coming upon the *World* (though some think otherwise), as was long since observed by *Cicero, ab ultima antiquitatis memoria notatum est Cometas semper calamitatum prœnuntios esse.*"

DECEASE OF ROBERT R. MCILVAINE, M. D.—We have no doubt the readers of the MEDICAL NEWS will be shocked, as we were, on learning of the decease of Dr. Robert R. McIlvaine. Dr. M. died in New York City, July 28th ult., and was buried, at his request, in Woodlawn Cemetery. He had been residing in New York City for near ten years.

No physician was better known in Cincinnati and throughout Ohio than Dr. McIlvaine. To the readers of the MEDICAL NEWS he was especially familiar, in consequence of his numerous communications and discussions published in it. About a year ago there was published in the NEWS the part he took in several discussions in the Medico-Legal Society of New York—one of the subjects being on Capital Punishment. Previous to his removing to New York, he was a frequent contributor to the NEWS.

In the medical societies of which he was a member, he always took an active part in the discussions, and was regarded an able disputant. It was in consequence of the part he took in discussions that he became so widely known, not only in Ohio, but in parts of Kentucky, Indiana, Illinois, and even other States west. At the meetings of the Ohio State Medical Society and other State societies, the marked features of his debates necessarily drew attention to him and made him prominent. His powers of memory were truly wonderful, enabling him to quote dates, and data of every kind, so fluently that every one hearing him was struck with astonishment. But his memory was not developed at the expense of his other mental faculties.

We grant that it had far greater development than the others, yet it can not be disputed that his powers of abstraction, reasoning and judging were fully up to the average of intelligent men. If he had not been able to make good use of his facts by means of well-developed reasoning faculties, he could not have so well maintained his side of a discussion, which he always did. A vast mass of undigested facts are of as little avail in debates as a lot of weapons to a warrior who is ignorant of how to use them. Dr. McIlvaine was always able to use his superior information to the best purpose in a discussion, and when he failed in maintaining his part, it was through weakness of the cause he advocated, and not because he did not handle it well.

Dr. McIlvaine founded the Academy of Medicine of Cincinnati. He wanted a society, as he used to express himself, founded on democratic principles, in which there was no exclusiveness, in which the only requirements for membership were the possession of a diploma, from a reputable school of medicine, and an unblemished professional reputation; requiring a vote of the majority to reject, and not of a very small minority. He arranged that the society should meet in a hall, and not at the houses of members, where an expensive collation was spread, and every one felt himself to be a guest, and more or less under restraint. The first President was Dr. R. D. Mussey, then quite aged, and long since deceased. The meetings were monthly.

For a long time the Academy prospered—the attendance upon the meetings being large, and many good papers were read. In time, however, the interest in the new organization began to subside, Dr. McIlvaine having gone to Europe, where he resided for a long time, and not being on hand to inspire the members with his enthusiasm. We recollect well the first meeting he attended on his return, held in the office of Dr. J. F. White, on the corner of Fourth and Ran Streets, the Academy, in the meantime, having been compelled to give up its hall in Bacon's Building, on the corner of Sixth and Walnut Streets, in consequence of a want of funds to pay rent. At this meeting there were not more than five or six members present, including Dr. McIlvaine. We were the secretary. The Dr., in some remarks, deplored very much the low state of the society, which seemed on the verge of extinction, and expressed surprise at the apathy of the members, which had brought it to the condition it was then in. He urged immediate action, and by his really eloquent remarks inspired with considerable enthusiasm those who were present. On his motion, arrangements were made immediately to hold weekly instead of monthly meetings, and to again procure a public hall in which to hold the meetings. Besides being placed on other committees, that were appointed in rejuvenating the organization, we recollect, he was made chairman of the committee to negotiate for a hall. Through his labors principally, for he was by far the most industrious worker, a lecture-room in the Dental College was procured, where for many years the Academy has met every week, except when it adjourns a few weeks during the heated term.

From this second founding, as it may almost be termed, by Dr. McIlvaine, the Academy has continued up until to-day, enjoying almost uninterrupted prosperity. At times discords have almost threatened its existence, but their effects have been only temporary—after the shock has been recovered from, the same prosperity has been resumed, so that, probably, there is not, at this time, a more active medical society in the United States than it is. The Academy owes Dr. McIlvaine a great debt, and should make recognition of its great obligation in some manner or other. Either a statue of him should be erected in the hall, or a fine painting placed on the wall.

The doctor, we believe, was a native of Pennsylvania. He was educated in the religious tenets of the Presbyterians, and always held that denomination in the highest esteem. He always spoke as if he thought that a calvinistic training developed strength of character and purpose in an individual, gave a high, moral tone, and, in brief, brought out to their fullest extent the principles of integrity, that should mark every true man and beautify his character. But he was himself not a communicant of any church. His knowledge of the Bible, however, was truly wonderful. It is seldom even that one finds a minister so versed in the Scriptures. He seemed almost to have them all, Old and New Testament, by heart. He could on the instant give book, chapter and verse of any text quoted.

His knowledge of history was phenomenal. There seemed not to be an event in the world's history, of sufficient importance to be chronicled, that he could not give the date of its occurrence and every particular pertaining to it.

Dr. McIlvaine was a man of very strong convictions, and never feared to state his sentiments. Although he never offensively obtruded his opinions upon persons, yet, when holding views that were unpopular, he had no hesitation in acknowledging them, and defending them on proper occasions. He was a reliable friend—one who defended a friend when assailed, and was not present to speak for himself. After the manner of Andrew Jackson—he would not sacrifice an old friend to make a new one, or to make half a dozen new ones. He loved the truth for the truth's sake, and always stated it as he believed it to be. He despised falsehood and humbug from his heart, and there was no one upon whom the mere glamour of outward show had so little effect. He was not faultless by any means; he had weaknesses, for frailty is a characteristic of humanity; but his faults did not prevent him dealing strictly justly with his fellow-men. His veracity was never called in question, and he was free from all vices. He never attended a theater in his life, and never witnessed a play on the stage. He owed no man anything, and if he became indebted to an individual one cent, as sometimes happens in making change, he would promptly pay it. We have known him to walk quite a distance to pay an indebtedness of one or two cents he had incurred.

He was the author of several pamphlets on medical subjects, the titles of which, as we write, we can not call to mind. As we have stated, he contributed numerous articles to the MEDICAL NEWS. What other journals he may have contributed to we can not say. At a period during the late war, we can not call to mind the year, he was Professor of Physiology in the Cincinnati College of Medicine and Surgery, Drs. Thos. Wood, Roelker, J. H. Tate, Daniel Vaughn, and others, embracing none of the present faculty, being his collegiates. He lectured very acceptably indeed, and was held in high esteem by the students. Seeing difficulties, however, in the way of the prosperity of the school, which he regarded insurmountable, he resigned, remaining in the school but one term. He was subsequently elected to a chair, but declined accepting.

He attended the Literary College at Marietta, O., but, we believe, he did not graduate. He came to Cincinnati when a young man, and resided here until about ten years ago, when he removed to New York City, where he lived until he died. Soon after coming to Cincinnati, he took up his residence with Dr. Wm. Mount, of Cumminsville, a village near the city at that time, but now forming a part of the city. He studied medicine with Dr. Mount, and graduated at the Medical College of Ohio. After graduating he opened an office, and practiced his profession for awhile. How long, we can not now state. While practicing, he rode a very fine horse, which was noted for carrying his head very erect. This peculiarity was so great that it drew the attention of every one, and caused his horse, by unanimous consent, to be called "Bucephalus."

In course of time the doctor grew weary of practicing medicine, and retired from its labors. He, however, did not at all lose his interest in it, but retained it to the day of his decease. Soon after discontinuing practice he went to Europe, and was absent two years or longer, obtaining a conversational knowledge of French. He spent most of his time in Paris, although he visited other cities of Europe, and made the familiar acquaintance of all the distinguished medical men of that great metropolis. We have often heard him speak of his intimacy with Claude Bernard and other distinguished French physicians. At another time he visited Europe.

Dr. McIlvaine amassed considerable wealth by his own exertions. He owned valuable property both in Cincinnati and New York City. Notwithstanding his having considerable means, he never married. It was a source of great regret, however, when he became advanced in years, that he had not married when young. He frequently spoke in strong terms in deprecating the condition of single life. He thought a man could not be truly happy who did not marry and raise a family. We know that for a long time before he died, he experienced to a painful degree the loneliness of living alone. Although of naturally a buoyant mind, he felt very much his lonely condition—without a confidant, as only a wife can be, and one to sympathize with him in pleasures and sorrows—and it had at times a very depressing influence.

"*Requiescat in pace.*"—He was an upright man and a useful man. When he departed, he could feel that the world was the better of his having lived in it.

We append an account of the *post mortem:*—He had been in failing health for two or three years. We really can not reconcile the disclosures of the *post mortem* with his condition during life. A year ago last June, when the American Medical Association met in New York, we visited him, and attended an entertainment with him at Coney Island. He seemed to be in tolerable health, and ate very heartily. A month or so after, about a year from this time, he visited Cincinnati. He then did not look well, but did not make much complaint. He dined with us, eating heartily. After that he visited Saratoga Springs, so a friend writes us. Last February, the same friend says, he had a severe chill, and from that he never rallied. We received during last spring a number of letters from him, in one of which, written in May, he said he hoped to be in Cincinnati about the 10th of June. He afterward wrote, and said his health would not permit his coming. Again in June he wrote, which was the last communication we received from him.

AUTOPSY.

Autopsy made on the body of Dr. Robert R. McIlvaine, of New York City, aged about seventy years, native of Pennsylvania, July 29, 1881, at 4½ o'clock P. M., eighteen hours after death, by Dr. Ed. C. Harwood, in the presence of Drs. S. S. Purple, E. H. M. Sell, John Messenger, S. T. Hubbard and J. T. Nagle.

Condition of body—Rigor mortis well marked; body poorly nourished; emaciation great; abdomen receded; face and skin of yellowish hue; resonance well marked over both lungs.

On sertion found old pleuratic adhesion of entire surface of right lung—both lungs healthy.

Liver adhered to stomach; between adhesions there was an abscess which, on breaking the adhesions, discharged about one ounce of thick pus; on section the liver was found to be healthy; the gall-bladder thoroughly distended with bile of normal appearance. Colon was adherent to stomach. Both orifices of the stomach were tied, and the organ removed, which on section was found to contain half a pint of brown, thick liquid, with offensive odor; one-third of stomach was filled with a tumor of cancerous nature; mucous membrane thickened, reddened and congested.

Spleen atrophied.

Heart, kidneys and other organs healthy.

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They are coated while the *mass is yet soft*, and will *remain* in same condition for *years*.

Special formulæ made and coated to order, when desired, in lots of 3,000 or upwards.

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Lozenges are of use in pharyngeal troubles that yield to ordinary medication. By being slowly dissolved, the medicament they contain is brought into contact with the diseased mucous membranes, and hence a beneficial influence, local as well as general, is exerted. In this respect they are of inestimable value to public speakers, teachers, singers, etc., as they are handy to carry about the person. In certain diseases of children, in worms, dyspepsia, and in cases where it is desirable to carry the remedy about the person (as with travelers), the lozenge is a useful form for a medicament. We manufacture fifty formulæ.

Special formulæ made to order of any desired size, shape, color or flavor, when ordered in quantities of three pounds or more.

Elixirs, Wines and Syrups.

We desire to call the attention of pharmacists to our preparations embraced under this head.

Prepared with all the improvements which long practical experience and high medical authority can suggest, we offer them as combining with therapeutical value, agreeableness of taste, and elegance in appearance.

We put them up in pounds, half gallons and demijohns.

N. B.—When ordered simply in "bulk," these articles will be sent in half-gallon bottles. If desired in four-ounce, one or five pound bottles, or in demijohns, please specify.

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Cascara Cordial.
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Empty Capsules.
Lactated Pepsine.
Saccharated Pepsine.
Pure Concentrated Pepsine.
Pancreatine.
New Remedies.
Acid, Hydrobromic Solution.
Acid, Salicylic Pure.
Berberina Hydrochlorate (Hydrastin Mur.).
Berberina Phosphate (Hydrastin Phosphate).
Choleate Sodium.
Chem. Pure Chloroform.
Chaulmoogra Oil.
Chrysophanic Acid.
Crude Petroleum Mass.
Dialyzed Iron.
Distilled Ext. Witch Hazel.
Dr. Warburg's Tincture.
Ethydene Dichloride.
Elixir Salicylic Acid.
Extract Malt.
Glycerated Dialyzed Iron.
Gurjun Balsam.
Hydrastia (White Alkaloid of Golden Seal).
Menthol.
Monobromated Camphor.
Nitrite Amyl.
Nitrite Amyl Pearls.
Picrate Ammonium.
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Pepsine and Lacto-Phos. Lime Lozenges.
Pure Cold Refined White Norwegian Cod Liver Oil.
Quinine Elixir.
Solution Sclerotic Acid.
Sulpho-Carbolate Sodium.
Syrup Iodide Iron.
Yerba Santa Lozenges,
Etc., Etc., Etc.

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One ounce, four ounce and eight ounce oblong white flint glass bottles, with our name (Kidder & Laird) blown in the bottle, and sixteen ounce round (plain) bottles, all having on them our metallic caps and labels. THESE ONLY STYLES, THE GENUINE, are sold at 35 cents per ounce, in quantities less than a pound, and $4 50 by the pound.

CALIFORNIA.

SAN FRANCISCO, CAL., Sept. 13th, 1878.
KIDDER & LAIRD:

Gentlemen—I have used Kidder's Saccharated Pepsine in my own family with the most satisfactory results, and consider it one of the best preparations of the kind manufactured. Yours, etc.,

JAMES G. STEELE, *Chemist.*

SAN FRANCISCO, CAL., July 1st, 1878.
KIDDER & LAIRD:

Gentlemen—We find it very satisfactory, and will always purchase your brand hereafter. Yours, etc.,

LAFORE & KAHN.

CONNECTICUT.

BRIDGEPORT, CONN., July 15th, 1878.
KIDDER & LAIRD:

Gentlemen—The physicians have used it in prescriptions, and think it a valuable preparation, and as good as they ever saw, and will give it the preference in their practice. I have been using Hawley's for the last five or six years. Yours, etc.,

W. & E. SHELTON.

WILLINGTON, CONN., Sept. 29th, 1877.
KIDDER & LAIRD:

Gents—Your elegant preparation of Pepsine has been received. I think it superior to any that I have ever used in my practice. Yours, etc.,

W. L. KELSEY, M. D.

ILLINOIS.

EDGEWOOD, ILL., July 11th, 1878.
KIDDER & LAIRD:

Gentlemen—I find Kidder's Saccharated Pepsine a fine article and very effective in conjunction with other treatments in cases of cholera infantum; would recommend it highly in such cases. Yours, etc.,

JOSEPH HALL, M. D.

MILLSTADT, ILL., June 25th, 1878.
KIDDER & LAIRD:

Gentlemen—I have adopted the use of Kidder's Saccharated Pepsine in preference to any other. It has proved satisfactory in every respect. Yours, etc.,

F. H. KRING.

STANTON, ILL., July 30th, 1878
KIDDER & LAIRD:

Gentlemen—Please send me one pound of Kidder's Saccharated Pepsine. This makes two and three-quarter pounds. I have used it mostly in prescriptions, and prescribed it in my practice, and find it a reliable article. Yours, etc.,

GEORGE BLEY, M. D.

STONE CREEK, ILL., June 15th, 1878.
KIDDER & LAIRD:

Gentlemen—I gave forty grains, in ten-grain doses, and it acted like a charm; shall use no other.

Yours, etc., L. HOBIE, M. D

WELLINGTON, ILL., March 2d, 1878.
KIDDER & LAIRD:

Gentlemen—I shall be glad to avail myself of another supply when needed. I have tested it, and find it fully up to your representations

Yours respectfully, DANIEL WESTON.

INDIANA.

GALVESTON, IND., July 8th, 1878.
KIDDER & LAIRD

Gentlemen—I have given your Kidder's Saccharated Pepsine my careful attention, and find it a splendid preparation. I can recommend it in my practice on account of its good qualities.

Yours, etc., B. U. LOOP.

INDIANAPOLIS, IND., July 12th, 1878.
KIDDER & LAIRD:

Gentlemen—Have given Kidder's Saccharated Pepsine in a number of cases of dyspepsia; also given it to the physicians in this locality, who were well pleased with the superior quality of it.

Yours, etc., S. J. HILLMAN, M. D.

SULLIVAN, IND., July 11th, 1878.
KIDDER & LAIRD:

Gentlemen—I have prescribed your Saccharated Pepsine, and recommended it to several physicians, who have used it and pronounce it a first-class article.

Respectfully yours, H. MALOTT, M. D.

WATERMAN, IND., July 19th, 1878.
KIDDER & LAIRD

Gentlemen—I have ascertained from three doctors in my neighborhood that your Kidder's Saccharated Pepsine is a better article than some of the more expensive preparations. Yours, etc.,

OLIVER LA TOURETTE.

LOUISIANA.

DELHI, RICHMOND PARK, LA., March 20th, 1878.
KIDDER & LAIRD:

Gents—When in need of Pepsine will always order Kidder's in preference to all others, as I like it best.

Yours very respectfully, E. W. THOMSON.

MANSFIELD, LA., Jan. 31st, 1878.
KIDDER & LAIRD:

Gents—I know it to be an excellent remedy, and shall in future keep it always on hand, both for my practice and myself. Yours respectfully,

R. T. GIBBS, M. D.

MARYLAND.

ANNAPOLIS, June 20th, 1878.
KIDDER & LAIRD

Gentlemen—Since the reception of your sample of Kidder's Saccharated Pepsine we have used no other. We consider it a first-class preparation. We have never heard anything to the contrary. We shall continue to dispense it unless well-founded objections are made, which we do not fear. We purchase from Messrs. Thomsen & Muth. Yours, etc.,

J. F. PERKINS & BRO.

BALTIMORE, June 19th, 1878.
KIDDER & LAIRD:

Gentlemen—I am using Kidder's Saccharated Pepsine with a great deal of satisfaction. I tested it with Scheffer's, and could not detect the least difference, and, in consequence, have had a number of pounds of yours, purchased from Thomsen & Muth.

Yours, etc., ISAAC R. BEAM.

BALTIMORE, June 19th, 1878.
KIDDER & LAIRD:

Gentlemen—Your Kidder's Saccharated Pepsine appears to be all you claim for it. I have not bought a grain elsewhere since I commenced using yours.

Yours, etc., C. A. GOSNELL.

BALTIMORE, MD., June 20th, 1878.
KIDDER & LAIRD:

Gentlemen—Your Kidder's Saccharated Pepsine has given good satisfaction. It is all you claim for it. Will hereafter use none but Kidder's.

Yours, etc., A. C. HUTHWELKER.

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Yours, etc., H. C. MOORE, M. D.

BALTIMORE, June 21st, 1878.
KIDDER & LAIRD:

Gentlemen—I have used Kidder's Saccharated Pepsine alongside Scheffer's, Boudault's, and others, as ordered, and have no reason to believe yours below the standard.

Yours, etc., JOHN SCHWARTZ.

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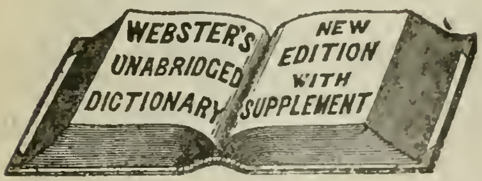

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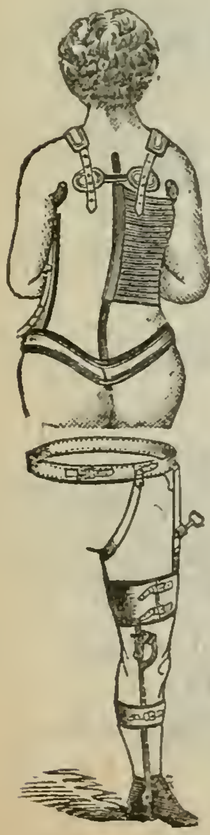

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From the tone of the seventy reports already received, fifteen of which are upon comparative tests with the principal Extracts of Malt in the market, we are fully justified in making the following claims, viz.:

FIRST:*-- *The Maltine (Plain) increases weight and strength far more rapidly than Cod Liver Oil or other nutritive agents.

SECOND:*—*That Maltine, Maltine with Peptones, and Maltine with Pepsin and Pancreatine, rapidly correct imperfect digestion and mal-nutrition in wasting diseases.

THIRD:*—*That Maltine is the most important constructive agent now known to the Medical Profession in Pulmonary Phthisis.

FOURTH:*—*That Maltine causes an increase in weight and strength one and a half to three times greater than any of the Extracts of Malt.

LIST OF MALTINE PREPARATIONS.

MALTINE—Plain.
MALTINE with Hops.
MALTINE with Alteratives.
MALTINE with Beef and Iron.
MALTINE with Cod Liver Oil
MALTINE with Cod Liver Oil and Iodide of Iron.
MALTINE with Cod Liver Oil and Pancreatine.
MALTINE with Cod Liver Oil and Phosphates.
MALTINE with Cod Liver Oil and Phosphorus.
MALTINE with Hypophosphites.
MALTINE with Iodides.
MALTINE with Peptones.
MALTINE with Pepsin and Pancreatine.
MALTINE with Phosphates.
MALTINE with Phosphates Iron and Quinia.
MALTINE with Phosphates Iron, Quinia and Strychnia.
MALTINE Ferrated.
MALTINE WINE.
MALTINE WINE with Pepsin and Pancreatine.
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* MALTINE is a concentrated extract of malted Barley, Wheat and Oats. In its preparation we employ not to exceed 150° Fahr.. thereby retaining all the nutritive and digestive agents unimpaired. Extracts of Malt are made from Barley alone, by the German process which directs that the mash be heated to 212° Fahr., thereby coagulating the Albuminoids and almost wholly destroying the starch digestive principle, Diastase.

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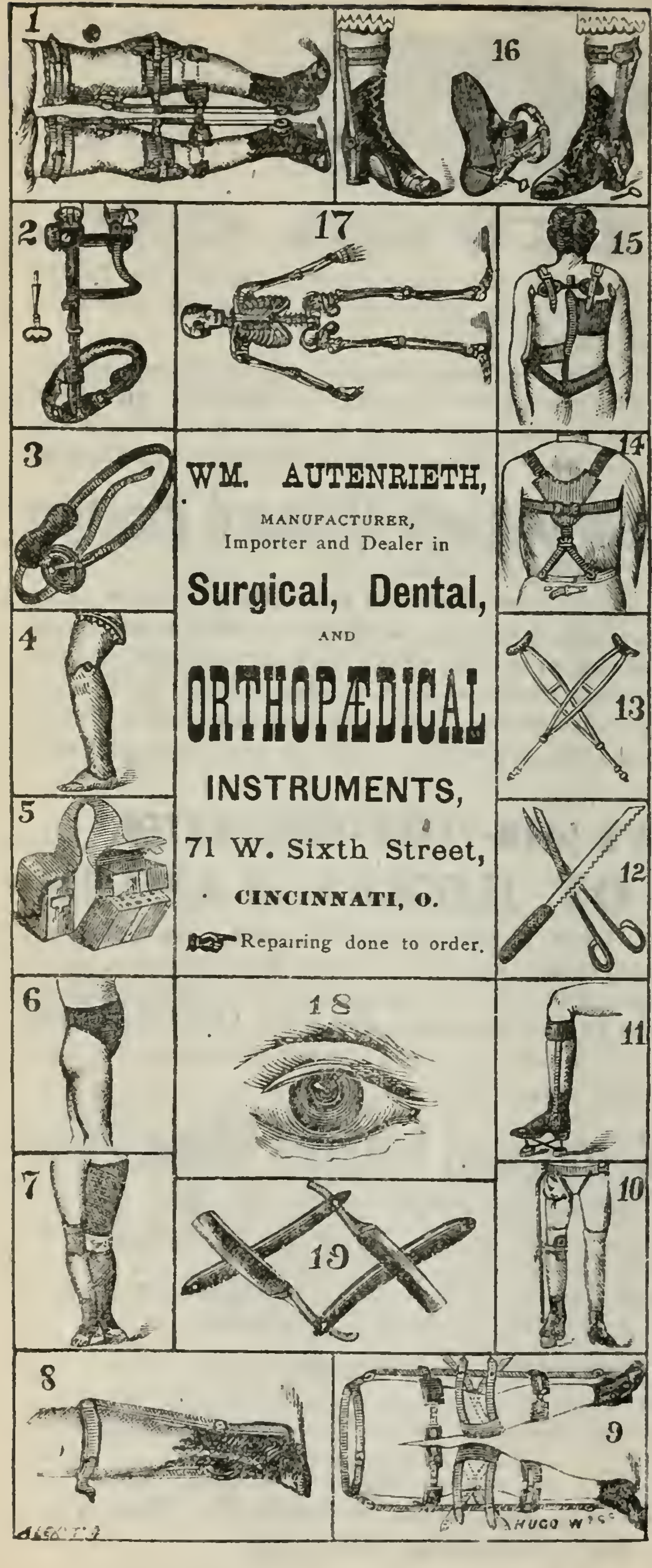

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